

UNIVERSITY OF KWAZULU-NATAL

HOUSING DELIVERY SYSTEMS: AN EVALUATION OF  
PUBLIC-PRIVATE PARTNERSHIPS TOWARDS PROVISION OF  
ADEQUATE HOUSING FOR THE MIDDLE-INCOME GROUP IN  
LAGOS NIGERIA

ANTHONY SULE ALABI

2012

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ADEQUATE HOUSING FOR THE MIDDLE-INCOME GROUP IN  
LAGOS NIGERIA

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BES/B.ARCH,M.ARCH

Submitted for the degree of Doctor of Philosophy in the School of Built Environment and Development Studies (Architecture/Housing), College of Humanities, University of Kwazulu -Natal.

MARCH, 2012

DURBAN

## **ABSTRACT**

This research thesis examined the applicability of the enablement paradigm in the public-private partnership (PPP) of housing delivery systems (HDS) in Lagos among middle-income groups using the periods of changing historic conditions as baseline for the analysis. Nigeria's post-democratic Housing and Urban Development Policy for the first time in 2002 recognized the formal private sector as a major stakeholder in its framework. This recognition was in line with the World Bank's policy recommendation for governments to create enabling environment for private sector participation in housing provision. The major changes by this policy were the grant of access to land with ownership tenure and access to housing finance with low interest rate.

This thesis underscores the failure of the Housing and Urban Development Policy framework in Nigeria to achieve real gains in housing delivery. By unbundling the determinants of HDS in Lagos, this research identified the universal objectives of housing delivery in terms of the quantity and quality of housing and its environmental quality.

The findings from this research work identified significant correlation between failures in government policies and poor stakeholders' delineation and roles. The study further associated stakeholder's delineation and role to PPP optimization: By so, identified PPP as the fulcrum for resource, process and social optimization towards achieving AHD.

Through an extensive analysis of historic conditions, theories and policies nationally and internationally, this research drew relevant lessons which informed its conceptual departure for unbundling PPP within HDS. It also relied on empirical data obtained from quantitative and qualitative research instruments drawn from four estate typologies and three categorized stakeholder's respondents' frame it used in evaluating HDS.

In its contribution, this study developed a project lifecycle framework for housing development, a proposal for PPP effectiveness and an Adequacy Evaluation Technique (AET). Common to these models was the delineation of the universal objectives of housing from which the 3-Qfactor of housing quantity, and quality and the quality of housing environment emanated as a measure of value added contribution. By this, the study established a departure from previous

architectural approaches which promised value satisfaction as a functional derivative of design. Through these models, PPP can be designed at the architectural and operational levels towards achieving AHD through the window of the universal objective of housing delivery; and can be evaluated for functional satisfaction and real value (return on investment) based on assessment of profitability of housing development actors/partners.

The second major contribution is the delineation of stakeholders in three dimensions namely, the household, the housing development actor/partner which reflects changing roles and circumstances and the housing development experts. Of emphasis are the changing roles and circumstances that this study is able to delineate from its literature and field work through an understanding of the social focus groups which exist within the Lagos settings.

This study in conclusion emphasizes the need for delineating stakeholders' roles contextually as a pre-condition to initiating partnerships. It also posits that there is need to deduce all resources, processes and social context as the framework for PPP before initiating partnerships. It established that, current policy practice already targets the middle-income in its use of PPP, and this can be extended to other social income groups and that the basis for the utilization of PPP should stem from an understanding of specific application of the three-step adequacy evaluation technique (AET) developed by this study as a relevant tool for evaluating the adequacy of housing development projects.

## **DECLARATION**

I hereby declare that I am the sole author of this research study and it has not been presented in any form to any other University for the award of any degree.

I hereby authorize the University of KwaZulu Natal to lend it to other institutions or individuals for the purpose of scholarly research.

**ALABI ANTHONY SULE**

**March 2012**

## **DEDICATION**

I dedicate this work to God for its completion. I recognize His grace for the accomplishment and to Him be all the Glory. This dedication is extended to my parents, Mr.T.O.Alabi (late), and Mrs. E.A. Alabi (nee Diagbonya), my parents, in-law: Mr E.A. Ogunsemoyin and Mrs A.O Ogunsemoyin (nee Ubrufi), to my wife, Olubunmi Onome Alabi for her tireless forbearance, and persistence that I complete this work and to my sweeties, my children; Toluwi, Tobi, Tomisin and Toyin for their patience during my protracted absence.

## ACKNOWLEDGEMENT

I wish to acknowledge contributions and my indebtedness to the following people and institutions for facilitating the completion of this research work.

My supervisor, Professor Ambrose Adebayo for his toiling with me towards achieving this work, with the numerous corrections and reviews of my original thinking and more especially his patience and continuous encouragement to ensure I complete the work; bending backwards to accommodate my peculiar circumstances in my numerous trips, Lagos-Durban. I am grateful to, Dr. Pauline Adebayo for her listening ears and willingness to discuss my difficult and complex concepts and Dr Isaac Mankilik for his input into the formulation of the statistical analysis for this work.

Professor David Aradeon who personally took several hours with me to shed light into the problems of Lagos housing and made research publications and documents available to me including sketches and pictures. I acknowledge the efforts of Prof. Kole Odusanmi who also assisted in providing published articles as well as several documents which he felt would assist my research direction; especially within short notices which I often demanded. The efforts of Professor Olumide Olusanya and Professor John Godwin are acknowledged in obtaining an initial Master of Architecture degree from which the quest for this doctoral research emanated.

Architect Taiwo Adedeji, the permanent secretary Lagos state ministry of physical planning for issuing a formal letter granting me access to make enquiries and source documents as well as granting all moral support towards enabling me obtain credible data/documents for the work. Mr. A.O.Ajayi and Architect Femi Wahab of the Lagos state Ministry of Housing and numerous colleagues and developers and associates whose helps towards achieving this work is appreciated.

The interviewees among experts, developers and households who had a fair share of been disturbed and answering sometimes repeated questions for clarity is hereby acknowledged. This acknowledgement would be incomplete without recognition of the valuable input by research assistants drawn from the University of Lagos and independent architects who facilitated and

worked tirelessly to administer and retrieve questionnaires under difficult situations and hostile social environments.

More so, I am grateful to members of DNL and PHI staff for their valuable assistance and moral support. My late Father Mr. Tijani Okunola Alabi who did not have the privilege of seeing the completion of the work but has always encouraged me to work hard; and my mother, Mrs. Elizabeth Alabi (nee-Diagbonya) and my Parents in-law, Mr. Emmanuel Adebawale and Mrs. Alice Ogunsemoyin (nee-Ubrufi).

The entire departmental secretariat, Library and postgraduate school at Kwazulu-Natal, who were always ready to assist me, do things on my behalf, and make life easy for me.

Most of all, my wife, who seemingly got used to my absence but would always, express her wish for me to complete the work.

My Heavenly Father, who knows all things and knows why I had to come this far to obtain this degree as well as His Grace without which I know I could never have been able to succeed.



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### LIST OF ABBREVIATIONS

|       |  |
|-------|--|
| AAMP  | Applicability Assessment Model for Partnering              |
| AEC   | Architecture, Engineering and Construction (professionals) |
| AET   | Adequacy Evaluation Technique                              |
| AHD   | Adequate Housing Delivery                                  |
| APBN  | Association of Professional Bodies of Nigeria              |
| BMAN  | Building Material Association of Nigeria                   |
| BPE   | Bureau of Public Enterprise                                |
| CBN   | Central Bank of Nigeria                                    |
| CBD   | Central Business District                                  |
| CBO   | Community Based Organizations                              |
| DWG   | Drawing  |
| FGN   | Federal Government of Nigeria                              |
| FHA   | Federal Housing Authority                                  |
| FMHUD | Federal Ministry of Housing and Urban Development          |
| FMWH  | Federal Ministry of Works and Housing                      |
| FMBN  | Federal Mortgage Bank of Nigeria                           |
| FOS   | Federal Office of Statistics                               |
| FRN   | Federal Republic of Nigeria                                |
| GRA   | Government Reserved Area                                   |
| GST   | General Systems Theory                                     |
| HDAP  | Housing Development Actor/Partner                          |
| HDE   | Housing Development Expert                                 |
| HDS   | Housing Delivery Systems                                   |
| ILO   | International Labour Organization                          |
| LASG  | Lagos State Government                                     |
| LASMH | Lagos State Ministry of Housing                            |
| LEDB  | Lagos Executive Development Board                          |
| LSDPC | Lagos State Development and Property Company               |
| LBIC  | Lagos Building, Investment, Corporation                    |
| MDG's | Millennium Development Goals                               |
| MER   | Man Environment Relations                                  |
| MBAN  | Mortgage Bankers Association of Nigeria                    |
| MOU   | Memorandum of Understanding                                |
| NBS   | Nigeria Building Society                                   |
| NBS   | National Bureau of Statistics                              |
| N     | Naira (Nigerian Currency: Naira-N and Kobo-K)              |
| NEEDS | National Economic Empowerment and Development Strategy     |
| NGO   | Non-Governmental Organization                              |
| NHF   | National Housing Fund                                      |
| NHTF  | National Housing Trust Fund                                |
| PPP   | Public-Private Partnership                                 |
| REDAN | Real Estate Developers Association of Nigeria              |
| ROI   | Return on Investment                                       |
| SAP   | Structural Adjustment Programme                            |



|       |   |
|-------|---|
| SEEDS | State Economic Empowerment Development Strategy |
| SFG   | Social Focus Groups                             |
| UN    | United Nations                                  |
| UNCHS | United Nations Center for Human Settlements     |
| WB    | World Bank                                      |

# SECTION I

## CHAPTER ONE INTRODUCTION

### 1.1 Background of the Study

This research thesis focuses on public-private partnership arrangements for Adequate Housing Delivery. It justifies PPP as a derivative of the public and the private sector Housing Delivery Systems, by delineating an internalized tripartite association between the public, private, and the emerging PPP union that is inseparable. This study uses the middle-income group in the Lagos urban setting and changing historic conditions of Nigeria as baseline for its analysis of the subjects of Housing Delivery Systems, public-private partnership, and Adequate Housing Delivery. A common feature of the middle-income group is their major source of income, which is employment, and this is in either the public or private sector. Regular income through employment often forms the basis for assessing affordability of housing within the government policy framework (NBS, 2007; Mabogunje, 2007; FOS, 2004; Aradeon, 2005). The provision of housing for this group is a corollary of the enablement paradigm advocated by the World Bank and proponents of public-private partnership (FGN, 2008, World Bank, 1993; Akomolede, 1990; Matrimort, 2006; Jones, Pisa, 2000).

In Nigeria, the government policy framework within which housing delivery systems co-exist has undergone several changes due to changing historical conditions (Awotono, 1988, 1987; Ying, 1997). The influences of these changes are in direct relation to the functions performed by established institutions such as the civil service, police, armed forces, and the railways to mention a few (Hunter, 1981; Gyuse, 1984). These establishments succinctly represent the power relations that existed (Baradat, 1997). The concept of public-private partnerships in this study draws from the hypothesis, which posits that, the pre-colonial and colonial periods in the historic condition of Lagos and Nigeria represented an era (circa, pre-1914 and 1914-1960 respectively) of adequate housing provision among the middle-income group (Aradeon, 1978, 2009; Mabogunje, 2002, 2005; Hunter 1981). During these periods, Lagos performed certain functions for its emerging institutional establishments. The traditional institutions adequately provided housing for households as a commune; while colonial establishments adequately provided housing implicitly for those whose involvements were relevant to perceived functions (Aradeon, 2008, 2009). A continuous increment and diversity of population and the commercial

---

function of Lagos did not experience a corresponding increment of housing stock in relation to diverse needs. However, the practice of institutions catering for the housing needs of those relevant to institutional function continued in total exclusion of all other migrants (Akomolede, 1990; Agundu, 2004; Abiodun, 1974, 1980; Okpala, 1991). The consequence of this practice is that, government intervened in housing production (Okpala, 1991). Unfortunately, these interventions were never concerted and comprehensive in approach (Gyuse, 1984). The beneficiaries of these government housing were considered fortunate, since there were no clear terms of reference for allocating access to housing occupancy except by employment, income, discretion or by lottery (Aradeon, 1978, 1980).

In retrospect, the advent of the Europeans did not displace these arrangements until the commercialization of resources and rapid (and lopsided) development programs became the order of events to satisfy the yearnings, aspirations and needs of the then emerging western industrialization (Aradeon, 1978; Hunter, 1981; Pugh, 1980; Barney, 2006). It was at this point in history, that the sudden social imbalance began to take its toll on local communities. The expansions of communities or forceful migration to emerging cities were often the choices; these cities obviously lacked the concerted effort to contain the new directions of frenzied developments. In most cases, the colonial masters were either ill prepared to accommodate the sudden population surge among the natives or were unwilling to deal with the consequences of their actions beyond the immediate confines of their existence and economy driven exploitation (Aradeon, 1978; Cohen, 1981; Daly, 1996).

Based on the above, a social transformation emerged which delineated Nigeria's tripartite heritage experiences namely the traditional, Islamic and later the European colonial influences (Eleh, 1987). This led to the emergence of two parallel settlement patterns at the planning-layout level, the nucleated community, and the gridiron community. Secondly, at the functional-design level, the activity defined space and the space-defined activities (Aradeon, 1991). The implication of these transformations at the planning and functional-design level is evident in the hybrid settlement and design patterns that emerged consequently, described as a creative synthesis or syncretism (Aradeon, 1978, Rapoport, 1983). This hybrid on the one hand was Eurocentric (Mediterranean) type and on the other Afro-Brazilian (Godwin, 2002). The conceptual design directions of the emerging syncretism took its lead from the basic understanding of the local climate, the function of the house and the preferred style that reflected the cultures the individuals and society wanted to accentuate (Fry, Drew, 1956). The traces of the indigenous style and their essential functional roles became secondary, subdued,

and unattractive to these emerging architectural expressions in the built environment (Aradeon, 1978; Ikejiofor, 1999; Uduku, 2006; Njoh, 2002).

These influences formed the basis for the existing housing environment in Lagos described as, *Non-homogeneous in perception, use and understanding of borrowed cultural forms, visually chaotic neighbourhood of intense human activities;...to the casual visitor and assimilate the neighbourhood lacks order but within the culture of the user, the underpinning human social relationship is ordered at several levels.*(Aradeon,1991:96).

It is evident that the impact of the European influence initiated the public housing delivery system with origins from two neighbourhood patterns; the government reserved areas (GRA) and the indigenous quarters (Aradeon, 1980; Mabogunje, 2002). The indigenous quarters catered for the local working class (emerging middle-income group) who alongside the Europeans established a new form of cultural systems and by so charting a new course for housing delivery. The “rooming” housing, which was the indigenous transformation of the colonial “boys-quarters”, was a step in the interpretation of pre-colonial housing habits by indigenes. This became the standard and ubiquitous housing for the larger population of Lagos and several other urban centers in Nigeria (Nwafor, 1979; Scwerdtfeger, 1982; Vlach, 1984). The European single-family house in its space-defined activity transformed into a single room for the urban working class in Lagos and most part of Nigeria (Aradeon, 1991).

Generally, these periods saw a constantly improving approach to housing delivery systems, which emerged to suit the demands of its target communities. The origin of this direction is not quite clear but it was obvious that the economics of global trends dictated the course for housing delivery then and even now. The impact of global trends pre-dates the final European occupation as colonial masters in 1914. For example, King Eyambo of Calabar imported a prefabricated iron palace from one Mr Laycock of London in 1843. The enormous cost forced the King to settle for an integration of wood and iron construction (The Builder, 13th May 1843 in Fry, Drew, 1956). These occurrences simply charted the course of public and private sector delivery systems; in this instance, it was the public colonial government, with varying interests from the indigenes.

More so, there was the implication of emerging migrants to Lagos due to the abolition of slavery. This era brought about an emerging housing market boom following the British regulatory intervention necessitated by their hegemony over the returnee slaves from Cuba, Brazil, and Sierra-Leon (Paris, 1998). The superior skills of these returnee slaves made them

more attractive than their indigenous traditional counterparts. The Afro-Brazilian (freed slaves) lifestyles, the European occupation, and the advent of the Italian master builders encouraged the use of local and imported materials as well as kept the pace of refinement for the entire housing delivery systems (Godwin 2002). Professionals and major actors were constantly in search of new ways to achieve adequate housing and improve the delivery systems as a matter of challenge yet ignoring the consequences of such trade-offs which negatively influenced the socio-cultural traditions adversely and the economic reliance on imported building material (Hunter 1981).

Even then, the introduction of formal reforms of the public sector with high profile promises did not achieve the needed results in increasing the housing stock and access to occupancy for the majority of migrants to Lagos (Awotono, 1990). Similarly, the private sector took advantage of the rapid commoditization of housing in Lagos by capitalizing on governments' inability to meet housing demand to create informal mechanisms that logically by-passed regulatory process to achieve housing production. Initially, this was to achieve opportunistic wealth accumulation discretely. This soon led to contraventions of existing building byelaws, planning regulations and consequently, a total disregard for all due processes in housing regulation (Alabi, 2005). Alabi (ibid) identified forty-two built environment contraventions in Lagos by citizens matched against the city's planning regulations. Most experts attribute this shortcoming to the promulgation of the land-use decree of 1978 (Mabogunje 2002, Onibokun 1975, Aradeon 1978). It was at this point that, both the public and private sector have worked at cross-purposes until date (Gyuse, 1984). Although, this research does not share this viewpoint, it observes that the land-use decree (1978), only gave credence to an already vulnerable situation where lifestyles and its interpretation of key issues had evolved and negatively influenced the housing sector and hence the ambience of the Lagos built environment.

From the above background to this study, it is clear that social arrangement, syncretism, institutional and organizational arrangements were emerging as key issues in the housing debate in relation to governments' inability to achieve planned objectives. However, the infusions of a variety of public sector policies, proliferation of public institutions, and more capital expenditure into housing development schemes did not achieve the planned objectives. Instead, these efforts created the needed loophole for the private sector to prey on the public sector housing indiscriminately. Whereby, the private sector colludes with corrupt government officials to trade in public housing and this is evidently in conflict with the government-planned objectives (Alabi, 2005). This phenomenon is traceable to a policy exclusion of the

private sector and their efforts at initiating housing developments along the corridors of public sector housing where land is accessible and not under government jurisdiction. Through the establishment of these housing along such corridors, the private sector can tap legally (or illegally) into the existing infrastructure meant for public housing estates. This indicates existing high levels of co-variation between factors of land value and government regulations (Awotono, 1981; Olayiwola.et.al, 2005).

Other reasons thought to account for the dynamic and multifaceted housing problem of Lagos as well as the housing arrangements which exist include; limited size of Lagos landed area, poor soil conditions and water logged terrain, the social structure of the land tenure system and population of over 15million (Mabogunje, 2002, 2005; Keonigsberger, 1964; Abiodun, 1974).

Therefore, there is need to define the context for public and private sector partnerships for providing adequate housing and evaluate if the basic components for such partnerships are necessary. To the extent that, such definition of context suggests' a mechanism to harness the internalized qualities of the public and the private sector towards achieving governments planned objectives. The research approach of this study is akin to the divergence theory yet it draws principal elements from the convergence standpoint point to demonstrate its applicability in harnessing internalized qualities of PPP (Kemeny, 1998): Given that, most housing theories applied to the Lagos housing problem have often originated from social convergence theories and economic theories only.

Although, the recent National Housing and Urban Development Policy created the framework for partnerships between public and private sector, the revised (FGN,2008) implementation guideline document by the regulating ministry (FMHUD) shows that, like previous approaches the theoretical basis is national. In this regard, the document is politically motivated and requires extensive political reforms; and the enforcement is unclear among other related issues. A closer observation shows that, this national approach is no different from previous convergence frameworks for housing which failed to achieve planned objectives. The key issue has remained the applicability by stakeholders, since the framework sets the stage for conflicts of interpretation and contextualization. Whereby, public-private sector stakeholders cannot legally guide and maximize their creativity towards efficiently utilizing the PPP framework. So far, there is no comprehensive basis for the assessment/evaluation of the contributions' of public-private partners in Nigeria and the verification of the outcomes of the entire success of the enablement strategy for housing delivery.

---

In order to be specific in terms of applicability, this research considered the metropolitan Lagos as its premise for broad based analysis of public-private partnership. It considers the built environment as its holistic context for the use of housing as a tool for improving the quality of life of its households. By using 'housing' as its subject, it investigates and articulates the processes of housing as a 'delivery system' and regards the problems inherent to this delivery system as its basis for examination of inputs and efforts against economic and historic conditions as investigative backdrops.

Observations show that more infusions of funds, and slum clearance, development of new towns and satellite towns in and around Lagos and similar third world cities, still leave the larger public with the problem of inadequate housing and inefficient delivery systems.

UNCHS (2000) identified insufficient housing as a global problem for the majority and for a third world country with a tripartite history like Nigeria; this applies (Eleh, 1987). The social, cultural and economic disparity as observed, further amplify the nature of the problems alongside its peculiar population explosion issues (FOS, 2006).

The choice of metropolitan Lagos for this study is born out of a quest to find lasting solutions to the debilitating problem of the Lagos housing delivery system. Secondly, the failures of government to formulate realistic policies, internalize, and optimize them for the acute housing shortage in conjunction with the urban housing situation of Lagos. Thirdly, several notable housing studies of global repute have been conducted here, such as; metropolitan Lagos and third world housing policies (Keonisberger, 1964), urban renewal and slum clearance, and more recent studies of mega city development and PPP arrangements (Aradeon, 2007; Mabaogunje, 2002; Olayiwola, et.al. 2005). From the several studies, the recommendations made and policies that ensued have influenced the larger country (Gyuse, 1984; Fadahunsi, 1975). Therefore, the need for a coordinated contribution of inputs from the public and private sectors would be the justified direction for the housing delivery process (Ogu, 2000). This is against the backdrop of current enablement paradigm which is favoured by the World Bank and among scholars internationally, (World Bank, 1993; UNCHS, 2001). More so, there is the underlying economic reform, which was to address the basic concerns of Nigerians through NEEDS and SEEDS as instituted by government. These backdrops imply a more theoretical engagement that retains critical and independent modes of inquiry, language conscious about theory and that which possesses the ability to guide academic pathway to political impact (O'Neill, 2010).

---

However, in order to achieve relevant political impact, this research study relied on the diversity of stakeholders in HDS of Lagos. In reality, stakeholders are by constraint more determined in their nature towards the delivery of housing, whether on social grounds, self-help, or commercial basis; statistics shows that 90% of housing provision in Lagos originates from the formal/informal private sectors (FOS, 2004). The fact that private sector stakeholders have so far met to some degree the needs of households, it is obvious that a review of existing conditions and arrangements in this direction will further throw fresh insight into the Lagos housing debate. An adequacy evaluation technique (AET) for housing delivery systems succinct to PPP arrangements with relevant models is tested. The adequacy Evaluation Technique serves as a tool for both public and private sector programs for justification of their partnership initiation and predicting the outcomes. This study identified the factors that influence stakeholders' arrangements towards achieving planned objectives.

## **1.2 Problem Statement**

Nigeria's successfully transition from one democratic government to another for the first time in her post colonial history, in May, 2007, has led to the current administration among its strategies for growth to adopt a seven-point agenda namely; power/energy, food security, wealth creation, land reforms, transportation, security and education. This policy reform was to entrench the rule of law as well as championing the need for active participation of the private sector in the development process of the economy (NBS, 2007; CBN, 2007; Mabogunje, 2007; Onwusonye, 2007).

This strategy for restructuring the economy is challenging due to several years of unstable military rule, which has created socio-economic inequalities as well as a volatile political atmosphere. One of such strategy was the adoption of the enabling approach to housing delivery as proposed by United Nations (UNCHS/ILO, 2006) and achieved through the strengthening of Primary Mortgage Institutions (PMI's). A further localization of this intense engagement of the private sector by government was to delineate and institute the Lagos Mega city project (Babawale, 2003; Yakubu, 2006; Mabogunje, 2007). This was to strengthen the perceived weak regional networks and improve the framework for infrastructural development among others towards achieving the millennium development goals (MDG's).

To understand the problem of housing in Lagos this study relied on the evolving housing conditions. Lagos was a former British colony and a city of the Yoruba tribe in South-West Nigeria located west of the African continent. In the 15<sup>th</sup> century, Lagos was the coastal outlet for Portuguese slave trade. Originally, owned and occupied by the Awori tribe, before the



advent of the Europeans in the 1400's; it served as the capital city for Nigeria during the most part of the colonial era until 12th December, 1991 during the military era when the capital was moved to Abuja. Lagos grew from a traditional settlement of about 3.85sq.km in 1881 to over 1,183sq.km currently and the population has grown from a mere 12,000 persons in the 1800's to over 13.5 million, and its estimated to rise to over 25.4 million by 2015 (UNCHS, 1996; LASG, 2007).

Fundamental to this population increase is the working class who occupies most of the 21.8% of flats/apartment type housing in the city and 57.9% of the housing stock constitutes the rental market in a 59.6% poverty context (FOS, 2004). It is from this point that the sprawling city necessitated the creation of the Lagos Mega-city concept. This is a regional master plan, which integrates the spread of Lagos into the neighbouring Ogun state northwards to form a single urban entity that covers 37% of Lagos state land area, but accommodates 90% of total population; with an average of about 20,000 persons per square kilometer in density (Okedele et.al. 2009).

A major step in the last ten years of the Federal Government towards creating an enabling environment comprehensively is the introduction of the new National housing and Urban Development Policy. This primarily deals with the framework for governments' Mass housing delivery and private participation (Mabogunje, 2007). Its proposition is based on estimates of an annual income of N480, 000=00 (about \$2000.USD) for the Federal civil service worker of between Grade level 10-13; alongside the international labour organization (ILO) recommendation of between 25-33% of that income per annum, as acceptable repayment basis for local computations. The repayment period is between 30-35 years for a worker who is currently within 30-35 years of age. This stratification for target-cost housing typifies the middle-income in Nigeria in terms of age, income, education, and other socio-economic/demographic indicators generally suggested for housing surveys (NBS, 2007).

Based on the above indicators, government-housing policy suggests a target-cost delivery to privileged working middle-income groups among established institutions of the public sector (Mabogunje, 2002; FGN, 2008). This is in total exclusion of other working migrants and the larger society (Awotona, 1990). This policy proposition assumes that this target group in reality represents those who have the capacity to rent and utilize rental funds as down payment for a mortgage or jump-start the self-help process of housing delivery. Unfortunately, this is not the case as most government workers are unable to part with 30% of their income to pay for these houses. In most cases, these houses come at a price well above the affordable means

of middle-income groups. While in the private sector, the middle-income group has better capacity to procure housing on cash basis. Their networks and social arrangements engender this ability. They are able to afford these housing through other means such as contributions from family, friends, thrift loans and several undisclosed businesses which they engage in to meet their self-help financial requirements. Critical to their project initiation is the building regulation process towards obtaining development rights (Egbu, et.al, 2008). Both the cumbersomeness of obtaining financing and building regulatory rights for development are key problems to HDS.

In addition, there is the limitation posed by the water to land ratio that inhibits physical development growth except by sand filling which alters the entire eco-system. Essential to sand filling is the outcome of the soil bearing capacity. This poor soil condition requires highly skilled technical methods, and huge financing to achieve structurally stable buildings. Since it is near impossible to achieve low-cost housing that will not qualify as a shack to the rest of the world within metropolitan Lagos given the prevailing technical and geo-physical constraints; and where these processes have been circumvented (even in government housing) they usually become disastrous in outcome. This is evident in consistent collapse of buildings due to indiscriminate developments and poor technical input from professionals in the built environment. This has led partly to excessive development of the landed area of the city with little undeveloped land left for other functions of the city apart from housing. Current data shows that, Lagos has developed over 50% of its land cover (Okude and Ademiluyi, 2006).

More so, there are social issues, which are associated to families, land, and home ownership. This association limits exchange by sale (Abiodun, 1985). It would be near impossible to try mass-resettlement and re-acquisition of plots or redevelopment of built-up plots without a social fight with the inhabitants of the city as has been the practice since the colonial days (Fadahunsi, 1975). Attempts at inner-city slum clearance and re-development plans have often failed. This is due to stiff resistance from the masses, borne out of resettlement experiences that simply out-stage incumbent dwellers from their inherited lands, and housing. It is a known fact that the resettlement exercise more often re-allocates ownership rights to the more affluent of society (Egbu, 2008; Aradeon, 2005).

In line with the national PPP framework and the economic framework for SEEDS towards achieving MDG's, there is the new partnership between Lagos state government and a private developer. The partnership intends to replicate the Dubai experience for a new housing scheme and city, that would be sustainable and two kilometers into the Atlantic Ocean. The strategy is

to further sand fill and reclaim parts of the Atlantic Ocean to create Eko Atlantic city of Lagos. The environmental issues and the cost would be expensive for the middle-income group. From a marketing source (that would rather remain anonymous), this study observed that the off-plan land sold for \$2,000 United States of America dollars per square meter at a minimum of one thousand square meters per plot). The entire direction is borne from the governors' visit to Dubai and what he thought could be possible in Lagos. This is comparable to a previous governor's experience in the seventies and his reaction (Aradeon, 1978, in Gugler, 1982: 109). Often times new policy and program directions in Nigeria is based on the whimsical deductions of political leaders and this constitutes a major problem for HDS.

However, it is evident in Nigeria that public-private partnerships is widely accepted in the provision of public facilities and services provision as seen and adopted from the United Kingdom Model (Akitoye et al., 2002; Ajalenkoko, 2007). The role of private sector involvement within Nigeria's national housing policy framework is widely ignored (Awotono, 1990; Akomolede, 1990; Agboola, 2003; Mabogunje, 2005). Common arrangements between government and the public are further stifled through establishment of government corporate agencies for housing delivery; unfortunately, these agencies were empowered to sell housing at commercial rate to the public through established mortgage financing institutions. Examples of these are the WEMA Board Estates, LSDPC estates to mention a few. The outcomes remain a blessing to selected few middle-income earners.

The resurgence of public-private partnerships in housing delivery of Nigeria based on the World Bank enablement strategy is traceable in part to the recent bank re-capitalization, capital market crash, and global economic meltdown. The aim of the recapitalization was to strengthen the financial institutions and make them able to compete in global circles. This has accounted for huge liquidity within the financial systems and the need to channel them into stable ventures. Mortgage financing and property development seems the most stable and most lucrative in an underserved housing market like Lagos, Nigeria. Hence, this may account for banks divesting into the mortgage business, and asset management, as well as insurance and pension management, since there is the promise of access to medium to long-term funds for the housing sector by government (Yakubu, 2006).

Mabogunje (2002), and Awotono (1990), observed that, while the middle-income group (which forms the bulk of the working class) suffers from the shortage in housing stock of Lagos, translating their aspirations into effective demand is more challenging. This is due to high degree of unemployment within their income group, as well as the necessity of food before shelter on the agenda of government (NBS, 2007).

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Therefore, this study concentrated on investigating the emerging middle-income group whose growing demand for housing and seeming inability to create effective demand remains a huge problem to the efforts of both the private and the public sector housing producers and stakeholders (Ogu,2000;NBS,2007).

Three groups of private sector participants in housing delivery in Nigeria are identified (Ogu, 2001); they are households, small-scale providers, and entrepreneurial private firms. UNCHS (1993:54), described the private sector actors in strict terms of “*contractors*”. Based on these earlier studies, this research delineated the stakeholders in terms that are more comprehensive, by analyzing existing partnerships within the public and private sector and among the middle-income groups and stratifying their roles and activities. This entailed the study of existing institutional and organizational arrangements among actors/partners and the critical success factors for middle-income HDS as it occurs within the context of existing social groups/formations and as economically defined by the National bureau for statistics, and national planning commission (2007).

Studies have shown that there are constraints in the arrangements that compel actors/partners into formulating types of partnerships and levels of associations with which housing decisions and housing programs are implemented (Ojo, 2006; Ogu, 2000; Olutuah, 2007; Brandsen, 2001). The result is a less predictive outcome of housing objectives. This is evident in the outcomes of multi-faceted housing delivery systems seen in the nucleated neighbourhoods of Lagos. The nucleated neighbourhoods occur as development strips, enclosed housing estates, traditional settlements encapsulated by new towns development, and several lateral variations to the growth of the city. The interplay of both the public and the private sector development direction gave rise to this dimension of segmented and incoherent human settlement pattern in metropolitan Lagos. The prevalent problems associated with this direction of growth are as follows:

- Population explosion in Lagos due to rural-urban migration/rapid commercialization and poor regional network in the country as it relates to the housing stock, and poor infrastructure. Estimates indicate a population rise above 25.4million by the year 2015(UNCHS, 1996).

- The negative impact of a non-cohesive national housing policy framework and strategy has always been the case since colonial era. Since public housing is tied to government employment with total exclusion of the private sector participation. However, most housing

schemes by government are often targets for private sector speculators by so defeating setout objectives (Gyuse, 1984; Pugh, 1991; Cohen, 2006).

-Land tenure problems; this is in terms of the land-use decree of 1978. The effect of Land use decree on local ownership, state titling, and the ineffectiveness of enforceable legislation (Mabogunje, 2007; Ogu, 2001; Onibukun, 1986).

-There is a Poor institutional framework and capacity for preparing, vetting, approving, and monitoring of the building process. Since the government, regulatory body is unable to meet up with the rate of development and have to contend with contraventions in retrospect rather than planning for development. There are no valid records obtainable for total number of housing development in Lagos, since various government agencies responsible have no data to validate the trend for forward planning (Egbu.et.al, 2008).

-Inaccessible finance and high cost of fund; low income levels as it impacts the abilities of household to translate housing aspirations into effective demand (Ojo, 2007).

-Rising cost of building materials and cost of construction generally: This is due to dependence on foreign building materials, against an unstable Naira value in terms of foreign exchange (Adams, 1995, 1998).

-The Urban structure and social structure problems of the city's history as seen in her urban settlement master plan, which emerged, from the distortions of traditional settlement patterns and their social networks/linkages by colonial institutional arrangements. The Infrastructural developments were strictly to satisfy the economic dictates of resource exploitation and the convenience of a handful of expatriates and sectarian care for the locals who patronized the colonialist. While the remainder of the traditional settlements and inhabitants were excluded, truncated, or by-passed to create new settlement networks around emerging colonial institutions. Such as the railways, police barracks, emerging central business districts close to the port, hospitals etc. This redefinition of housing by colonial governments from a social entity in traditional terms to an employment-career based benefit and a subsidy to those who participated in fostering the exploitation process remains a legacy to current public and private sector housing objectives with negative consequences on the outcomes of housing policies until date. This social structure and growth pattern accounts for the segmented nature of the city of Lagos in its urban form and from which the myriad of housing problems emanated (Aradeon, 1981). This tragedy is epitomized in the architecture of the city's housing

development through the four factors thought to determine the conflicts between design intentions and realities of spatial-use by Aradeon (ibid) namely; land-use system, land-use design, variable factor of spatial use and physical control issues.

These identified multi-faceted and multi-disciplinary problems are detrimental to efficient and sustainable housing delivery systems of Lagos. Therefore, using Lagos as a case study and the enablement paradigm as framework by focusing on public-private partnership as a policy approach in Nigeria the study informed the extent to which partners achieved planned objectives and played their roles in the housing delivery system.

More so, there is the problem of adequacy in contributions and outcomes as enabled partners interact. In defining a critical path for sustainable and efficient housing delivery, theories such as urban theories, architectural theories, socio-cultural theories, and global neo-liberal theories formed the basis for analysis. This research utilized the inherent attributes of housing delivery systems to examine internalized conflicts and collaborations and the need to overcome the mitigating problems, which emanate from the weaknesses of both institutional and organizational arrangements. As cited earlier, previous studies in housing policy and delivery systems have criticized specific delivery systems but this research concentrated on ‘unbundling’ the internalized conflicts and collaboration among private and public partners in relation to physical qualities and quantities of housing and the arrangements among partners in relation to architectural paradigms specific to Lagos.

The need for new architectural design influences that would explain human unsettlement in relation to housing is important (Rapoport, 1978, 1983; Angel 2000; Cohen, 2004; Cater, 2010; Buckminster, 1978). This new direction advocates the infusion of a broad knowledge base from various specialties into the design process (Cater, 2010). Whereby, architecture serves as a confluence for extrapolating and applying this broad based knowledge into a synthesized useable form and function for everyday life. It is from the analysis that ensues in the HDS of Lagos that new architectural paradigms would emerge for PPP contributions among middle-income groups; knowing that they can contribute to financing their housing but within current arrangements cannot to do so due to the highlighted prevailing problems. The philosophical approach to solving these problems as it affects Lagos and the rest of Africa is contained in the following statement. *“African renaissance does not entail replicating these past cities, but rather understanding the city form and characteristics and thereby borrowing from the positive qualities of these old cities in order to contribute to the development of contemporary and future African cities”*(Adebayo,2002:355).

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### **1.3 Aim of the Study**

The aim of this research is to develop a framework for evaluating the Adequacy of Housing Delivery in relation to the enablement paradigm for Public-Private Partnership contributions.

### **1.4 Research Questions**

This study addresses the limitation of the middle-income group based on the enablement paradigm for public-private partnership towards provision of target housing as set out by the National policy framework within the following research questions:

Can the housing delivery system for public-private partnership as set out in Nigeria's National Housing Policy framework enable government to meet planned objectives and households to meet their housing aspiration among the middle-income group? If not, how can public-private partnerships' improve governments' policies and planned objectives, for households, and housing development actors/partners in Lagos?

#### **1.4.1 Subsidiary Research Questions**

1. What are the types of housing delivery systems in Lagos?
2. What are the specific roles and forms of public-private partnerships in the housing delivery systems of Lagos?
3. What are the influences of planning/architectural typologies on the outcomes of planned objectives of PPP housing programs in Lagos?
4. What are the determinants of public-private partnerships and how are they able to predict future levels of Adequate Housing Delivery (AHD) among actors/partners housing experts?

### **1.5 Objectives of the Study**

The broad based objective of this research is to investigate the institutional and organizational arrangements among actors/partners for adequate housing delivery. The specific Objectives are as follows:

1. To identify factors that determines housing delivery systems in Lagos.
  2. To define the roles of actors/partners and their institutional and organizational arrangements as well as their specific forms of housing delivery systems for attaining adequate housing delivery.
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3. To delineate the relationship that exists between objectives of actors/ partners, the housing delivery systems and architectural typology.
4. To develop model/s (Adequacy Evaluation Technique, AET) from the determinants of partnerships for predicting future levels of adequate housing delivery and partnership arrangements.

### **1.6 Research Hypothesis of the Study**

The objectives of Adequate Housing Delivery (AHD) are dependent on stakeholders' delineation. However, the outcome of HDS for stakeholders does not correspond to the objectives of AHD for a social setting; hence, adequacy is unachievable. Therefore, by redefining the objectives of AHD and delineating stakeholders, the outcome is a more efficient HDS in the direction of adequacy. This hypothesis posits that, PPP is a more efficient subsystem of HDS when housing objectives and stakeholders delineation directly defines adequate housing delivery (AHD). Therefore, in principle the efficiency of HDS is dependent on the thrust of its subsystem where the aim is to achieve AHD.

This research delineated the stakeholders in terms of households, housing development actors/partners, and housing experts. More so, it identified three objectives for housing, the need to increase quantity of housing, improve the quality of housing and the housing environment and calls it the universal objectives of housing. There is a significant relationship between the outcome of these universal objectives in housing and the efficiency of HDS. In order to guide the study, factors, which determine HDS, PPP and AHD in relation to the universal objectives of housing (called the 3-Q factors), defined the direction of the research investigation: From this direction, four hypothetical subsets of the main hypothesis named I-IV emerged for testing the hypothesis (qualitatively and quantitatively).

#### **Hypothesis I**

Factors such as Housing Design preference/taste, provision of infrastructure, Household income, levels of building activity regulations, tenure, process costs, and typology (layout/design) are not the main determinants of Housing Delivery Systems (HDS) of Housing Development Actors/Partners in Lagos.

#### **Hypothesis II**

Factors such as Provision of infrastructure, Property Price, Access to financing, Access to Land, profit motive and levels of actors/partners commitment are not the main determinants of Public-Private Partnerships contributions.

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### **Hypothesis III**

Differences in housing delivery systems of actors/partners arrangements such as tenure, government policy, and factors of land value are not the determinants of design/layout-Typology.

### **Hypothesis IV**

Changes in future levels of actors/partners commitment cannot predict changes in levels of building activity regulations and design/layout-Typology.

## **1.7 Relevance of the study**

This study evaluates the preconditions and conditions for sustainable Housing Delivery Systems and attempts to place in perspective relevant information that will aid housing development actors/partners to formulate coalitions towards adequate housing delivery. Since such coalitions would improve the utilization of resources and streamline housing objectives and consequently improve housing delivery outcomes.

Research work in public-private partnership is limited and usually from the viewpoint of other disciplines rather than architecture. More so, policy thrusts for third world countries emanate from economic and social paradigms of the World Bank from which country-based predetermined design-typology tailored to target-cost is adapted for implementation (Guggler, Gilbert, 1982, Mabogunje, 2005). This totally negates the theoretical intent of sustainability and adequacy for the end-users/beneficiaries. Therefore, this study is relevant to the growing body of knowledge that is focusing on housing delivery in post democratic Nigeria, which is legislation guided as against previous military fiat.

In addition, there is a need for better understanding of public-private partnerships as a mechanism for housing delivery in Lagos, Nigeria and other emerging economies around the world. How this mechanism affects likely coalitions among actors/partners its important? More so, there is the need to know the specific influences of PPP on lifestyle in terms of land-use system, and land-use design (Rappoport, 1983; Aradeon, 1981). This is against the need driven by rural urban migration, human unsettlement and the forecast that half of the world's population would congregate in cities by the year 2030 (UNCHS,1996,2006;Miles et.al,1979; Frampton, 1999; Florida, 2000;Buckminster,1978). In this regard, the expectation is that Lagos would review housing policies, HDS and avoid the future population catastrophe through PPP contribution in the creation of mechanisms for AHD.

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By taking advantage of the social, economic, political and traditional values and the contrast of housing standards in Lagos, this analysis would make more evident the disparity in housing delivery systems in Lagos and streamline those features of partnerships that are more likely to promote adequate housing delivery with emphasis on ‘process’ rather than ‘product’ (Rapoport, 1983).

Given the above, it is evident that a study of public-private partnerships in the housing delivery system of Lagos requires fresh-insight. By so, the specific application of the enablement paradigm in PPP translates the accuracy of planned objectives into achievable tasks for actors/partners.

### **1.8 Limitations of the Study**

There is the limitation posed by inaccurate data of population and existing housing statistics. The available data are sometime contradictory due to political undertones. As seen in the data for Lagos state population, deduced from household censuses, which is different from the recognized National censuses: Since this affects national resource distribution (LASG, 2007; FGN, 2007). More so, due to national unrest and security issues the public are rather in distrust towards entertaining strangers who would want to interview them or collect data through them in anyway. The underlying limitations of this study would be borne in the analytical process. This research would attempt to use the limited documents/publications in public-private partnership in housing as well as justify the premise of its arguments from previous case studies in relation to the housing delivery systems of Lagos.

### **1.9 Scope of the study**

This research concentrates on the Metropolitan Lagos as delineated by the Lagos state Government for development purposes. It considers this within the Federal government approved Twenty local government areas (as against the state government instituted sixty local development areas; even though it's still the same geographic limit). It is from these twenty local government areas that this research shall concentrate on four local councils which are representative of the period and influence of government policy under study. They are, the Lagos Island, Ibeju-Lekki, Lagos Mainland and Amuwo-Odofin local government areas.

The study focuses on the guiding concept for most formal housing developments in Lagos called the ‘housing estate’ form/typology described as the “government layout” or the “private layout” (Aradeon, 1981). It is from this delineation that four observed frameworks for estate establishment was deduced among Housing Development Actors/Partners namely:

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(i) Where housing provision is by government: (public sector initiative; government provided the land, layout and built by direct labour through government agencies and not for profit purposes)

(ii). Where housing provision is by government corporate agency, (government provides the land, layout and enables its government agency to build for profit purposes)

(iii). Where housing provision is by private company :( private sector initiative; private Real Estate Development Association of Nigeria member sources its land from local family landowners, prepares its layout and had to return to government for ratification, and sources its own finance from the private sector).

(iv). Where housing provision is by private company in partnership with government: (public-private partnership). The private partner is a REDAN member and they conceptually originate the housing scheme, and mutually collaborate towards successful completion of project).

These four relationships between the private and public sector shall be the scope for the research investigation. The representation of households (who are residents and resident administrators of the estate) alongside the housing development actors/partners and the housing development experts are defined under the definition subsection (1.10).

In this study, the sample takes into cognizance the age of the estate typology in relation to two major policies between 1987 and 2007 (a twenty-year period). This period covers both the military and democratic era in Nigeria's history and policies. The first of these policies was the enactment of the mortgage institutions' Act (Decree 55 of 1989) and the second is the National Housing and Urban Development Policy (2002). Both policy changes acted as catalyst to the HDS and set the stage for a comprehensive approach. The aim on both occasion was to review the institutional framework and organizational arrangements which mitigated against adequate housing delivery among housing development actors/partners as well as increasing the housing stock for the benefits of households (Gyuse, 1984; Mabogunje, 2005).

It is important to point out that, the informal housing development actors/partners are not included in the scope of this research and their associated households. Their mention in this research document does not suggest their inclusion for data collection and analysis. The focus was on the formal middle-income group, their housing estate, households, housing

development actors/partners and housing experts whose perception of housing favours the provision of housing estates.

This study spanned a five-year period and there were certain changes in the National policy in relation to housing delivery systems. One of such is the increment of the single-family accessible loan through the National Housing Fund from N5million to N15million in 2010. Unfortunately, there was no corresponding increase in the salaries of civil servants, which is still at a minimum wage of N18, 000 per annum. The change is recognized but not included as a part of its argument for affordability, since it does not influence the source of income and disposable income for households due to their lack of capacity to repay such loans.

## **1.10 Definition of Terms**

### **D1.10.1 Housing**

The following definitions support the adopted concept of housing for this research:

-Pugh (1980:50) defined housing as, *“a fixed space and it exists in localities where private investment and publicly provided infrastructure are part of the local environment”*.

-Rapoport (2001:145) *“...considers housing as a system of settings within which a certain system of activities takes place.”*

-National Housing Policy (2006:10) defined housing as, *“the process of providing functional support by sustainable maintenance of the bulk environment for the day-to-day living and activities of individuals and families within the country”*.

Four key elements of housing are vital to our proposition for the definition of housing and they are the ‘fixed space’ in terms of planning and design, the ‘investment’ element in terms of Profitability/motives and ‘a system of settings’ (this includes the housing environment and lifestyle). The fourth element is ‘the process’ element which is the driving mechanism from which all other elements engage their capabilities.

In this regard this thesis adopts a hybrid of all three definitions which is paraphrased thus; that housing is a ‘fixed space’ by design that should be provided for by ‘private investment’ and ‘public infrastructure’ in a ‘sustainable’ and ‘process’ based ‘system of settings’ from which day-to-day living and activities occurs. This definition encompasses the seeming diametric

constituents of housing that is of concern towards harnessing the potential of partnerships and adopted to inform the direction of this study.

#### **D1.10.2 Housing Delivery System (HDS)**

Prins(1994:39) *“A housing delivery system can be considered as a social configuration relating to the production and distribution of housing, with more or less formalized relations between the actors performing the necessary functions in the housing process”*.

This definition of HDS is most appropriate in its acceptance of social configuration thought to be fundamental to any HDS and liberal concept of relations between actors/partners.

#### **D1.10.3 Public-Private Partnership (PPP)**

UNCHS (1993:180 in Jones, Pisa, 2000), considers partnerships to be an active and deliberate process whereby agents work together in an interdependent fashion toward a common agenda or goal.

Pugh (1994), describes partnership arrangements as the joining-together of government policy makers, government agencies, community based organizations, non-government organizations, private builder and/or householders; and that, the success of the enablement approach is dependent on the success of partnerships. Pugh’s definition is a more inclusive approach for adaptation by this study. This definition is in line with the thesis proposition for the definition of objectives and roles among actors/partners.

#### **D1.10.4 Adequate Housing Delivery (AHD)**

Two concepts in housing furnished the basis for this definition; the concept of standards and the concept of sustainability of the housing delivery system. Therefore, if an item is a standard then, is it sustainable for the setting and the objectives. The definition of AHD is an answer to the definition of standards and sustainability.

Mabogunje, (in Jackson ed., 1978:78) defines standard as follows;

*“Standards are two types; “official standards are those established by legislation, byelaws, or other rules and regulations, while cultural standards are those derived from traditional practices or found tolerable and acceptable by a large number of people.” The guide to these standards is called “criteria”;...they may be related to social values, or they may be recommendations offered by professional or scientific bodies and based on research, case*

*studies or professional judgment.” This culminated into a submission that ...“standards should be scientifically desirable, culturally feasible, and socially acceptable”.*

Choguill (2007:143-149) defined sustainability in the following terms;

- sustainability for whom: individual, household, community, city or country.
- dimension of sustainability: environment, use of scarce resources, cost recovery etc.
- sustainability for specific housing segments: housing delivery system, maintenance, transportation, poverty program, local governance, peoples empowerment, etc.

A measure of adequate housing delivery as a proposition for contextual use shall take the indicators above into consideration. This research used this descriptive meaning to capture the essence of adequacy from a simultaneous measure of the objectives of actors/partners' standards and sustainability in terms of quantity, quality and quality of housing environment (quality of life).

#### **D1.10.5 Housing Development Actors/Partners**

The housing development actor/partner is defined for this study as a stakeholder whose informal/formal partnership arrangements enables their performance of one or more functions in the housing process (Ogu, 2001; Malpezi, 1990; Keonisberger, 1970; Prins,1994). They include the public sector officials: government policy makers (researchers, directors, permanent secretaries, professionals, etc), government agency officials, and the private sector officials: Corporate members (company professional staff) of real estate developers association (from REDAN member listing).

#### **D1.10.6 Housing Process Expert**

These are professional or academic experts who have exercised themselves in the study of housing and /or the practice of architecture/or an allied profession(UNCHS,1991,1990,Yai.et al2007;Yu.et al.2007;Zunino,2006;Zrudlo,1978;World Bank,1993).

They form the bulk of the informant interview participants as their opinion and experience usually informs the discretion of the informal sector; especially of private builders and politicians alike.

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### **D1.10.7 Household/Residents**

These are the current occupiers of housing in the four types of estates in this study (Irrespective of the tenure). As it has been proven that Lagos in particular have a huge housing shortage, there is therefore a high possibility of dwelling arrangement that has deviated from the standard formal institutional preconceived settings which are currently not upheld (Aradeon, 1978, Gyuse, 1984). Therefore defining household or residents otherwise may be misleading.

### **D1.10.8 Housing Environment**

Rapoport (2001:146) defines it in terms of *the “environmental quality profiles (settings)”*. These sets of attributes of environmental quality are the components of culture such as; ideals, images, schemata, meanings, norms, standards, expectations, rules etc. Thereby, answering the question of, *“what is ‘good’ or ‘better’ environment (for whom, why and how one knows it is better) ”*

Jackson ed. (2001:3) describes it as that, which is...*“created by investments or lack of them that are allocated by both the public and the private sectors”*.

Thus, the investment capacity of these two sources accounts for the internalized differences and the general characteristics of the housing environment. These definitions synthesize the approach to this research.

### **D1.10.9 General Systems Theory (GST)**

(Bertalanffy, 1950 in Bello, 1985:132) defines GST as, *“A system can be defined as a complex of interacting elements within a whole; of which its part/elements stand in certain relation to each other, so that their behavior in one relation is different from other relations. The general systems theory GST, is a logico-mathematical discipline, which is in itself purely formal, but is applicable to all sciences concerned with systems.”*

This definition is valuable in conceptualizing and explaining the interactions that co-exist within HDS.

## **1.11 Assumptions**

**A1.11.1** The key premise of this study is the target income group described as middle- income. This is based on the National housing policy focus on target-cost based housing provision through Real Estate Developers Association of Nigeria members (REDAN). They are to provide such housing based on a deduced target income which is referenced as middle-income on the federal government salary scale for the civil service.

**A1.11.2** The material and technology assumptions for the housing delivery systems is the use of intermediate technology, which is largely the current practice for REDAN members and the local construction industry (Olusanya, 1992). This entails the use of sandcrete-block walls that are readily available and rendered in sand-cement mixture and painted to finish.

**A1.11.3** The beneficiary distribution channels for the housing produced by REDAN members and other government-based actors is through access to national housing fund (NHF) from the primary mortgage institutions and the federal mortgage bank. This originates from the Federal Ministry of Housing and Urban Development (FMHUD) framework for PPP participation by developers (REDAN). This framework takes into cognizance the current land tenure practices based on the Land Use Decree of 1978.

**A1.11.4** This thesis assumes that the current debate on housing reforms would not be consequential to the HDS and AHD, given that this research proposes an HDS objective-based reform rather than the broad legal policy reforms among actors/partners. It therefore accepts that, the existing framework is enough as a legal and functional template for improving HDS and AHD and the PPP contributions.

## **1.12 Organization of Work**

The study is in three sections namely I, II and III.

### **SECTION I**

This section comprises of three chapters, one, two, and three.

Chapter-one is the, general introduction to the entire work, problem statement, aim and the objective of the study, the research questions, relevance of the study, its hypothesis, scope of work, and assumptions considered relevant in the immediate, and the Organization of work.

Chapter-two is the research methodology and chapter-three is the theoretical and conceptual framework for which the entire study developed its direction.

### **SECTION II**

This section comprises of chapters four, five, and six.

Chapter-four is a review of the literature within areas of contextual study and an analysis of the body of knowledge that exists on this subject. This comprises of an exploratory analysis of historical developments of urban housing and the housing epochs in Nigeria. This includes the interrelationship between concepts and subjects in housing alongside theories and their applicability to the Nigerian urban situation. Chapter-five is the outcomes of policy approach



reviewed in the historical development. Chapter-six concentrated on the delineation of HDS, PPP, and AHD, their interrelationship.

### SECTION III

This section comprises of chapters seven, eight, and nine.

Chapter-seven is the Lagos case study, the research development framework in application to the city of Lagos and the study area. Chapter-eight deals with data presentation, data analysis. Discussions on findings, validations of predictive instruments constructed for HDS, PPP, and AHD. Chapter-nine is a summary of the study, the conclusion drawn from the entire analysis, policy implications of the study and recommendations.

#### **1.13 Style and Convention**

The adopted organization and numbering of definition and equation is as follows:-

All theoretical analysis are arranged in Sections I, II, and III with subsections e.g. 4.0, 4.1, 4.2.1 and up to 4.2.1.1

The definitions relevant to the section ascribed with ‘D’ e.g. (D4.2) The second definition (D) in chapter four (4).

Tables, figures, and assumptions numbered according to the chapter in which they appear e.g. Table 4.2, is the second table in chapter (4). Similarly, figure (Fig. 4.2) and assumptions ascribed with “A” e.g., (A 4.2) will be read in the same way.

## CHAPTER TWO

### RESEARCH METHODOLOGY

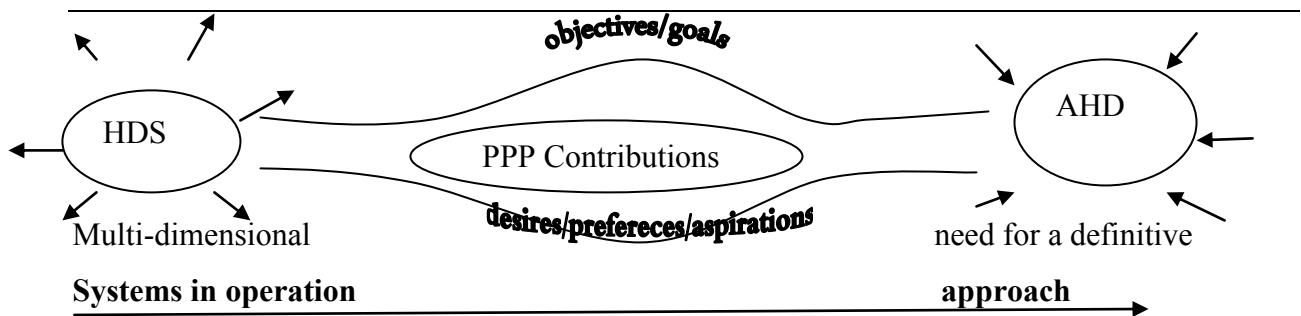
#### 2.1 Introduction

In Nigeria, the housing conditions of households are important social indicators for stimulating welfare (FOS, 2004). In socio-economic terms, housing conditions and housing delivery systems are interrelated; they form the basis for arrangements among households and actors/partners. The indicators of housing arrangements among households, actors/partners, and experts revolve around the institutional framework of the public and private sectors of the economy. Since housing is essentially an economic good in a market economy (Turner, 1972; Kemmeny, 1981). There is therefore, an outcome of both the formal and informal arrangements among households and actors/partners, which stimulates the housing delivery system. This study identified partners' arrangements and an emerging pathway for achieving planned objectives through an analysis of design intentions, partners' commitments, and the extent of actors/partners contribution to the efficiency of the choice of housing delivery systems towards achieving adequacy; in this research the choice is PPP a subset (typology) of HDS.

Therefore, by delineating PPP contributions this research streamlined inputs in clear terms of the housing quantity, quality, and quality of housing environment already cited as the universal objectives of HDS succinct to any other in the housing debate. By so, the housing delivery system becomes the platform for stakeholders' participatory unification yet unbundling their roles in terms of their identity and contributions as households, actors/ partners and experts. The overriding contribution, which emanates from this unbundling, enabled the conceptualization of PPP.

The research focused on identifying the determinants of the housing delivery systems and developed predictive models for future levels of partnerships. This aided the construction of models that took into account the determinants of partnerships and the correlation between partners' arrangements and architectural typologies as key indicators to the adequacy of partners' contributions and housing, in terms of quantity and quality of housing and the quality of housing environment. The premise that the arrangements inform the housing typologies is succinct to the entire research. This is strategic because, forms of theory, paradigm, and concepts for housing are physically visible in architectural terms based on function and characterization of the built form.

Therefore, the four subsets of the research hypothesis (in Section 1.6) enabled the unbundling of HDS, PPP, and AHD in terms of contributions and efficiency. Figure 2.1 shows the overall linear direction adopted for the study. This is by streamlining the multidimensional HDS into an HDS subset (typology) called PPP from which adequacy evaluation emanated.



**Figure.2.1** Linear proposition of the research direction

## 2.2 Research Design

The research used the cross sectional and ex-post facto research design. Specifically by purposive/judgmental sampling and snowballing-technique of the target samples thought to be relevant for this study. As indicated in the literature review, the nucleated housing in Lagos is a product of public and private initiatives borne out of internally generated needs to meet target demands of various social focus groups (Aradeon, 1988). It is by this cross-sectional observation, that this research brings to bear the ex-post facto technique, since the cause and effect conditions have already occurred. The causal factors and effect relationship are to be determined by tracking relevant information's and available data. The variable thought to instill the cause is the independent variable while the affected variable is the dependent variable. This method enables observing without attempting to control the subjects within the sample groups (Araoye, 2003; Yin, 1989).

## 2.3 Population of the Study

The use of the entire population of Lagos households, actors/partners, and experts as database alongside the architectural typology of all the known historic epochs is conceivable. In reality, it is not practical to capture such a wide coverage given the time and resources to carry out the research.

In this regard, this study's samples are from the three main categories of respondents delineated as stakeholders. By extrapolating the tektological selection theory of Bogdanov and Bertalanffy (in Bello, 1985), the mechanism of selection was divided into three parts representatively and respectively; the object of selection represented by the households, the agent or factor of the selection represented by the housing development actors/partners and the

basis of the selection represented by the housing development experts. The implication is that the household is the object of the housing, the investment and public interest, which conveys the household objective, is the housing development actor/partner and theoretical basis for the entire housing in a given context is the housing expert. These three specific groups of population to the research are discussed below:

### **2.3.1 The Households**

This group comprises the head of households (male or female) who are the responsibility takers to see that they provide housing for the rest of the family. This group includes all the tenure types, since it is usually ownership or rental predominantly among middle-income groups in Lagos. Studies show that 57% of housing stock in Lagos is rental tenure (FOS, 2004).

### **2.3.2 The Housing Development Actors/Partners**

They comprise of the public sector and their corporate agencies, the private sector corporate developers, small-scale providers, householders and entrepreneurial private firms. They engage in the housing activity both for profit and for welfare or personal reasons. Their arrangements are critical to the housing delivery process and they largely implement what they perceive as the standards as well as their coalitions remain the basis for organizational arrangements.

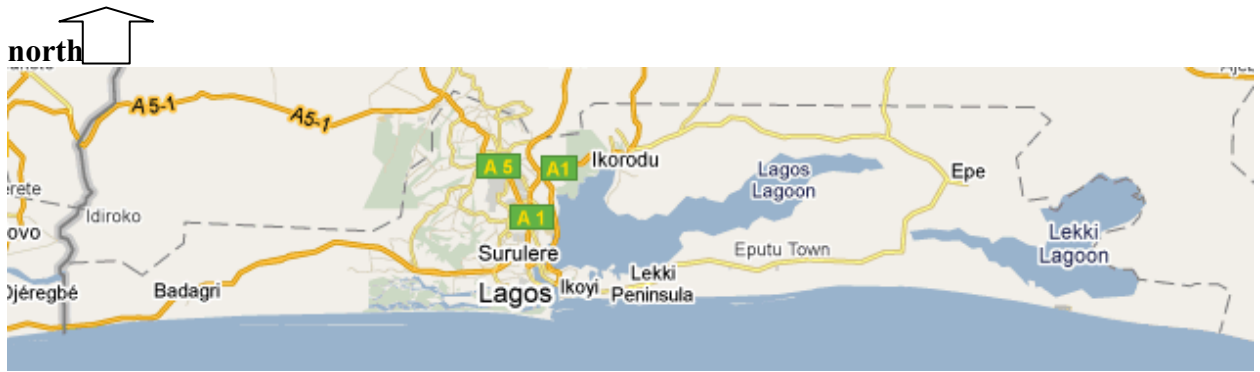
### **2.3.3 The Housing Development Experts**

This group comprises of professionals in the public sector, researchers and academics, executives from financial institutions, professionals in public/private practice, property lawyers, and politicians. They form the bulk of policy opinion and policy critics whose expertise often forms the basis for government rationale in deciding the framework and concepts for housing delivery and the participatory approaches. They are largely the social network from which institutional policies emanate.

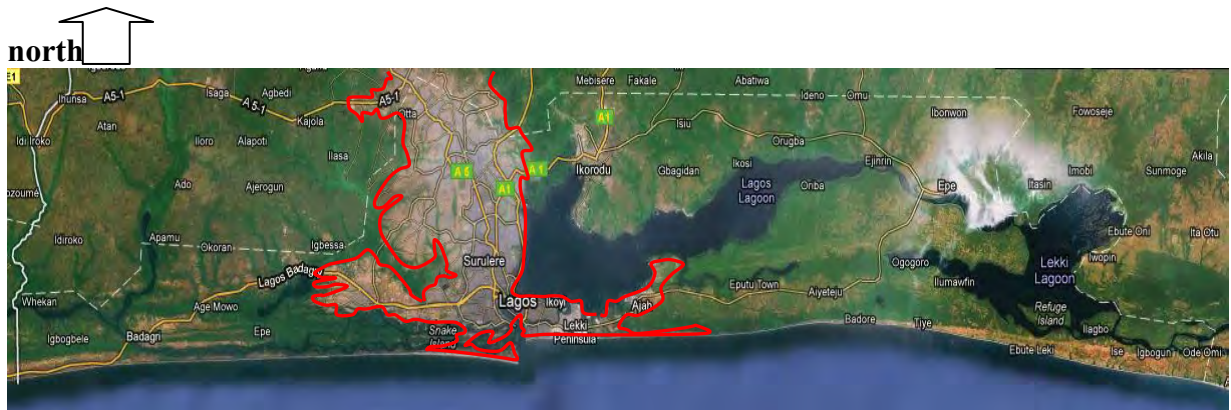
## **2.4 The Study Area**

The study area is located based on the political delineation of metropolitan Lagos by the federal Republic of Nigeria as constitutionally acknowledged. Figure 2.2 shows the Lagos state boundary in dotted lines from which the following broad study area emanate.

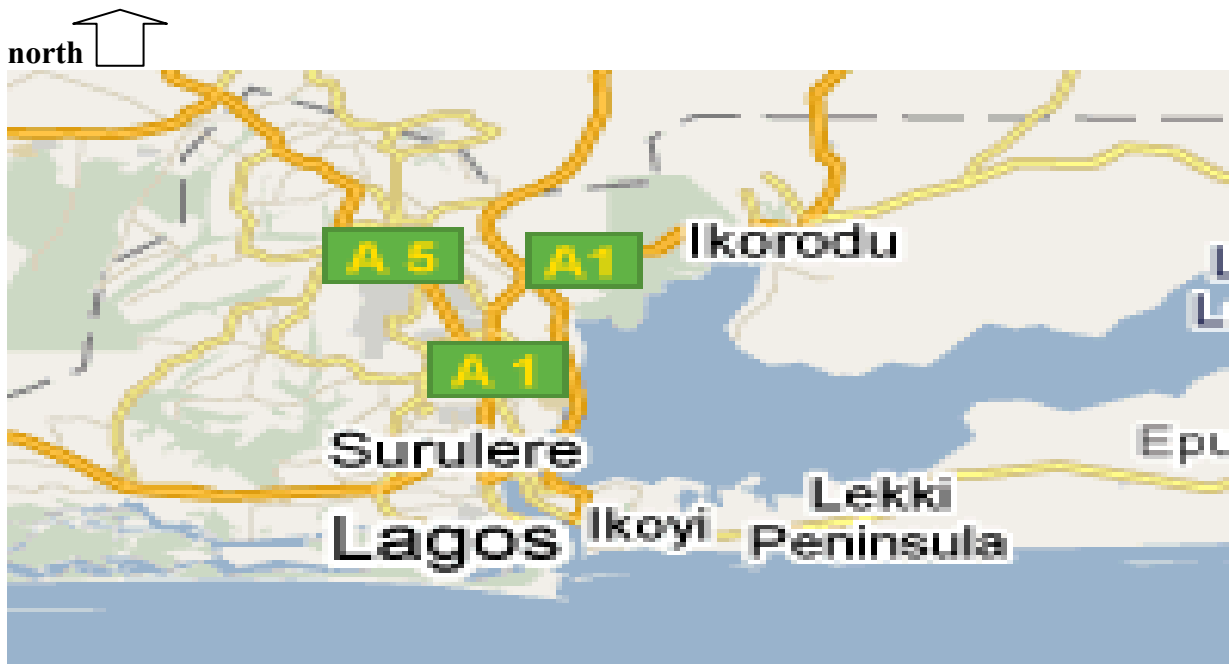
- 1.Lagos,Lekki axis(east)
- 2.Lagos,Badagry axis(west)
- 3.Lagos Island,(central)
- 4.Lagos Mainland,(North)



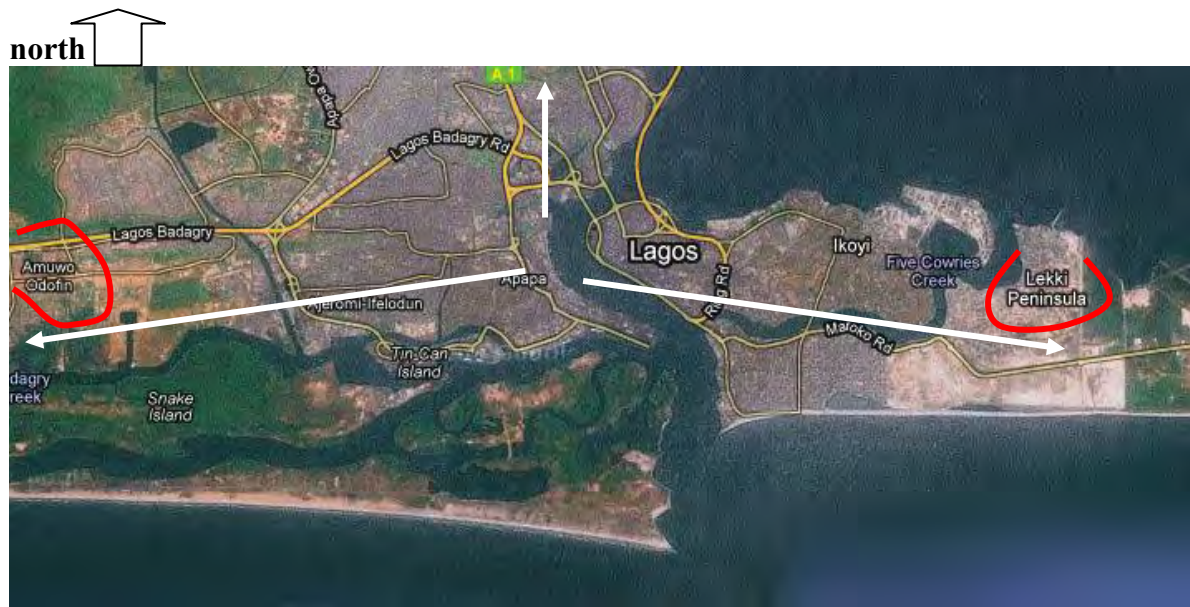
**Figure 2.2** Shows the extent of Lagos state; the dotted boundary lines show the limits. nts. (source, www.googlemap.com)



**Figure 2.3** Shows the dense patch of the growth of Lagos as at 2010. It is observed that this growth to the north is beyond the state boundary limits; this necessitated the mega-city status. nts. (Source, www.googlemap.com)



**Figure 2.4** shows Lagos Island (where Lagos is written) Ikoyi and Lekki Peninsula constitutes the new development direction for the middle-income group. The main Land comprises of all areas north of Lagos Island and Ikoyi; Surulere, Ikorodu and the rest as indicated above. nts. (Source, www.googlemap.com)



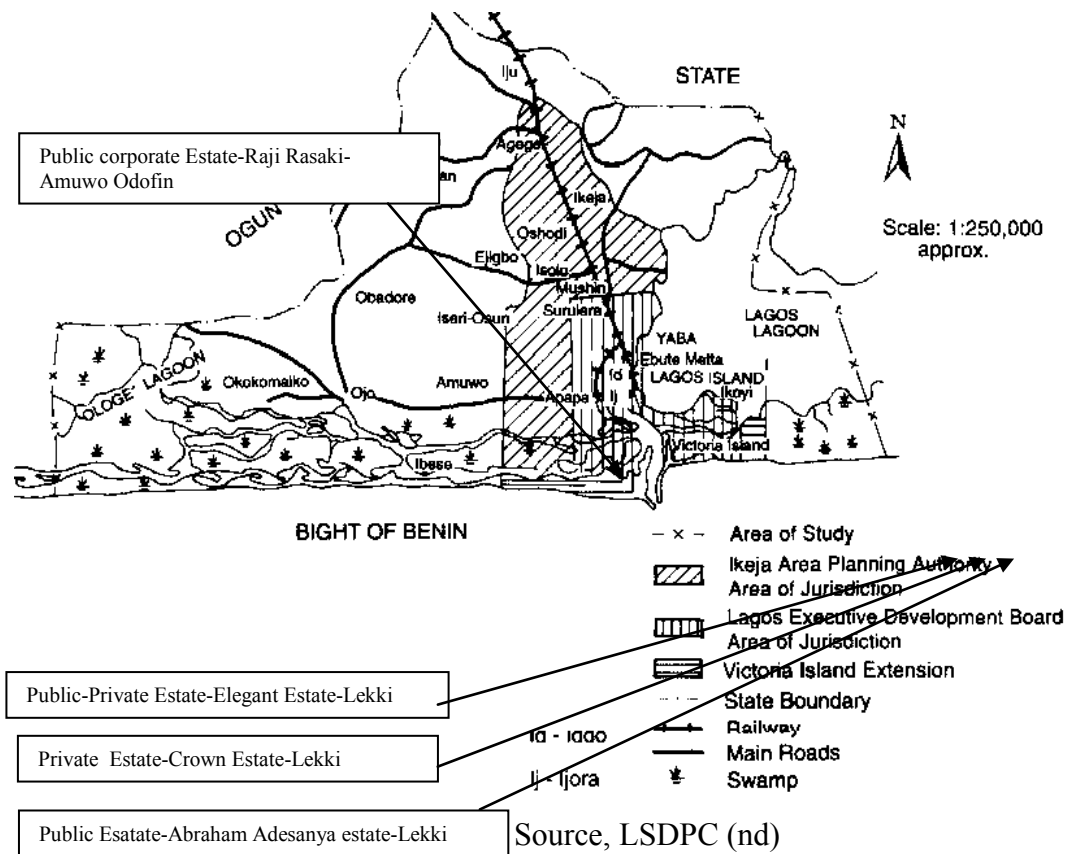
**Figure 2.5** shows the development density of the study area; To the far left is Amuwo Odofin from where Public-corporate estate typology is located, to the right is the Lekki Peninsula where the remainder three estate typologies are located. The white arrows show the growth direction of Lagos to the north, east and west. (source, www.googlemap.com)

**Table 2.1** Study Area; Land, water and wetlands by local government area (area in km<sup>2</sup>)

| Local Government Area | Water      | Wetland    | Land         | Total        |
|-----------------------|------------|------------|--------------|--------------|
| Ikorodu               | 152        | 29         | 280          | 461          |
| Lagos Island          | 38         | 28         | 144          | 210          |
| Lagos Mainland        | 54         | 2          | 32           | 88           |
| Ikeja                 | -          | 45         | 247          | 292          |
| Shomolu               | -          | 3          | 34           | 37           |
| Mushin                | -          | 19         | 52           | 71           |
| Badagry(part)         | 65         | 201        | 214          | 480          |
|                       | <b>309</b> | <b>327</b> | <b>1,003</b> | <b>1,639</b> |

Source: MPPU/UN/WSA, 1978 in Smith (1978)

All these areas in table 2.1 are traditional settlements, which became commercial hubs and have grown into other areas of the city and they all co-exist as multi-nucleated entity divided by roads of convenience from which the entire city's segmentation originates. Figure 2.5 shows the dense patch of growth of the city within the core of the state boundary. Common to these areas is the rising prices of housing both rental and ownership tenure. The specific location of the four estate typologies in relation to metropolitan Lagos is as shown in figure 2.6 below. The relative locations of central Lagos in relation to the study axis is as shown in figures 2.4 and 2.5. The white arrows in figure 2.5 show the direction of housing growth in Lagos relative to the central Lagos Island which is the core of commerce in the state.



The nucleated neighborhood settings of government and private layouts as they occur form the basis for the selection of the study area as above. It is from these neighbourhood settings that the selection of individual estates that are representative of the typologies for the study is drawn. The disparity in rental cost and the price of housing across these areas makes the cross-sectional survey of these areas relevant to the study. Table 2.2 gives is an indicative overview of rental/sale disparity in Lagos and benchmarked against the three-bedroom flat design typology often in high demand for the working middle-income group. From the table, it is evident that social ties/family sentiments in Lagos Central accounts for the low rental/sale value in comparison to the Lagos South east (Ikoyi). This is the core residential area for expatriates due to the colonial setting and security related issues. Rent remains a good source of income for families in most areas of Lagos in a bid to accumulate surplus value.

This disparity in rental/sale is important to issues of target housing for social focus groups. This reflects the internalized housing market among locals who either would have inherited the properties from parents or obtained government allocation as a public sector employee; or most recently bought the property at a reduced rate of 50%-70% of current market price during the FGN monetization exercise of 2004-2006.

**Table 2.2 Indicative Rental/Sale Overview of the Study Area**

| <b>Area of Lagos</b>         | <b>Rental 3-Bedrm Flat/annum</b> | <b>Social ties/Sale options</b>  |
|------------------------------|----------------------------------|--|
| Lagos Island                 |                                  |  |
| Isale-Eko (Lagos Central)    | N0.5million/annum (\$3,500USD)   | Social ties/family sentiments restricts sales: Rent a good source of annual income as inheritance among siblings                                 |
| Ikoyi(Lagos South East)      | N5million/annum (\$33,000USD)    | Weak social ties/family sentiments; Sale value as high as N150m (\$1.0mUSD) Expatriate workforce target market.                                  |
| Victoria Island(Lagos South) | N4million/annum (\$27,000USD)    | Ditto Ikoyi above  |
| Lekki (Lagos East)           | N2.5million/annum (\$16,000USD)  | Sale price of about N75m(\$0.5MUSD) nucleated estates void of family sentiments and numerous family excised lands full of family ties/sentiments |
| Lagos Mainland (Lagos North) |                                  |  |
| Ikeja                        | N0.75m/annum                     | Sale/N30m(single flat)   |
| Amuwo Odofin                 | N0.5m/annum                      | Sale/N25m(single flat)   |
| Shomolu                      | N0.350m/annum                    | Sale/N28m for a block of 4flats  |

Source: Field Survey: Author, 2010

The variations in pricing becomes lower as you move away from the international business hub of Ikoyi and Victoria Island areas (situated in the immediacy of Lagos Island and Lekki peninsula as shown in figures 2.2 to 2.6).

Lagos west is densely populated and more desirable for the lower income groups essentially derived from an abandoned planning of the entire region and due to the establishment of the Federal Capital Territory, Abuja by government. The Alaba-international market is located in this axis of Lagos and in a state of neglect in terms of infrastructure. Except for pockets of housing estates like the public-corporate one selected for this study. Table 2.3 shows the relevant population figure for the study areas based on local government areas (LGA's).



The selection of the housing estates in the study was based on the method of establishing the estates, as a public or private actor/partner initiated estate. The study identified estate typologies based on the neighbourhoods of Lagos accros the development axis shown in figure 2.6. However, the choice of Lagos reflects the following:

- (i)It represents the socio-cultural diversity of Nigeria in one city.
- (ii)It represents the historic experience of housing development in Nigeria (pre-colonial to post colonial).
- (iii)It represents the complexity of urbanization (as a mega-city).
- (iv)It represents the dynamics of an emerging economy in a Third world country.

**Table 2.3** The authentic census: Lagos State Social Security Exercise and Estimated Population figure by Sex and Local government area.

| <i>Local Government</i> | <i>Male</i>      | <i>Female</i>    | <i>Total</i>      |
|-------------------------|------------------|------------------|-------------------|
| Agege                   | 564,239          | 468,825          | 1,033,064         |
| Ajeromi-Ifelodun        | 723,644          | 711,651          | 1,435,295         |
| Alimosho                | 1,099,656        | 947,370          | 2,047,026         |
| <b>Amuwo Odofin</b>     | <b>301,012</b>   | <b>223,959</b>   | <b>524,971</b>    |
| Apapa                   | 264,728          | 257,656          | 522,384           |
| Badagry                 | 187,427          | 192,993          | 380,420           |
| Epe                     | 153,360          | 170,274          | 323,634           |
| Eti-Osa                 | 460,124          | 523,391          | 983,515           |
| <b>Ibeju-Lekki</b>      | <b>49,613</b>    | <b>49,927</b>    | <b>99,540</b>     |
| Ifako-Ijaiye            | 380,112          | 364,211          | 744,323           |
| Ikeja                   | 328,778          | 319,942          | 648,720           |
| Ikorodu                 | 364,207          | 324,838          | 689,045           |
| Kosofe                  | 527,539          | 407,075          | 934,614           |
| Lagos-Island            | 461,830          | 398,019          | 859,849           |
| Lagos-Mainland          | 326,433          | 303,036          | 629,469           |
| Mushin                  | 684,176          | 637,341          | 1,321,517         |
| Ojo                     | 507,693          | 433,830          | 941,523           |
| Oshodi-Isolo            | 514,857          | 619,691          | 1,134,548         |
| Somolu                  | 517,210          | 507,913          | 1,025,123         |
| Surulere                | 698,403          | 575,959          | 1,274,362         |
| <b>STATE TOTAL</b>      | <b>9,115,041</b> | <b>8,437,901</b> | <b>17,552,942</b> |

SOURCE: Lagos Government State: 2006 **Note:** Selection of two LGA's from twenty LGA's; which represents 10% in the two direction of rapid growth of residential development in the city.

## 2.5 Selection of Subjects

### 2.5.1 Sampling Frame

This is not a management study of partnership arrangements or a macro-economic study of housing demand and supply. The focus is on the indicators emanating from contributions to the adequacy of housing delivery systems used to improve the quantity and quality of housing and the quality of housing environment in Lagos.

The following stakeholder based category sample frames were selected, among which are two informant groups:

### 1. The households

Households studied were occupants of existing housing estates within metropolitan Lagos. This is to understand the correlation between choice of housing and the housing delivery systems among households. Four housing estate initiation typologies identified from the literature review of this work defined the basis for the selection of samples. These four housing estate typologies represent a cross-section of all existing estates in Lagos based on the method of public sectors involvement in the initiation. The estate typologies are; private estate, public estate, public-corporate estate and public-private estate (PPP). This is succinct to the process function and the housing process as identified in the literature.

Therefore, from the currently identified estates in Lagos by this research (since no single government agency or record could establish this data) there were forty-one (41) medium-income housing estates of various sizes. This comprised of eleven (11) public estates, thirteen (13) Private estates, twelve (12) public-corporate estates, and five (5) PPP estates. (Out of which only one known PPP estate was completed as at May 2010). From this sample frame obtained, the samples of respondents were selected by random sampling technique. These figures represent one estate in every ten estates in existence (that is  $1/10^{\text{th}}$ ) for each of the four-estate category based on the available listing and stratified by the age of the estate.

The selected housing estate typology listed below is alongside the actual name of the developed project.

- i. Public estate, Abraham adesanya estate,lekki-epe axis.
- ii. Private estate,Crown estate,lekki-epe axis.
- iii. Public-corporate estate,Raji-rasaki esate,badagry axis.
- iv. Public-private partnership estate,Elegant court,lekki-epe axis

### 2. The Housing development actors/partners

The sample frame is drawn from a population of 46 members of Real Estate Developers association of Nigeria (REDAN) in Lagos as extracted from the National list. From this sample frame, housing development actors/partners were selected by using purposive/ judgmental sampling technique to choose respondents.

### 3. Housing development experts

The sample frame was drawn randomly from a purposive selection of respondents in the following categories;

- Academics (university of Lagos), three professors in the faculty of environmental sciences,
- Lagos state Ministry of Housing, (three director level employees):
- Financial institutions (senior management level employees)
- Association of Professional Bodies of Nigeria, (APBN): This comprised of a professional list of 12 professional bodies and their chapter members.

A sample frame was drawn from a population of 220 decision makers and professionals with direct influence on the delivery of housing whose institutional opinion matters in the housing delivery system of Lagos (notionally and technically).

### **2.5.2 Sampling Technique**

Random sampling technique was used to obtain the sample of household respondents by selecting every fourth housing unit in the sample frame of each of the four-typology housing estate. Random sampling is widely used to ensure same probability/chance of selection within a given sample frame( Asika,1991).

The respondents from housing development actors/partners were selected by Purposive/ judgmental sampling technique. The sampling frame was obtained from a national list of REDAN members who have executed housing estates that fit at least one of the four-estate establishment criteria within the last 10 years and have at least 50 single-family housing units in the particular estate. This is premised on the overall size of REDAN member developed estates as observed from the housing policy document (FGN, 2003).

The housing experts were drawn by using purposive/judgmental sampling technique to obtain the sample of respondents from a selection among chartered AEC professionals, academics (professors and doctoral degree holders), and director level and above employees of Lagos state government and management level employees of financial institutions located in Lagos. The diversity group of this selection reinforces the cross-sectional perception of AEC professionals in public and private sectors. Their expert opinion forms the basis for standards and policy formulation.

## 2.6 Sample Sizes

### Household sample size:

The selected four-estate typologies have a combined 890 single-family dwelling units. By using systematic sampling technique, 10% (that is 89) of the total housing units formed the sample size. This comprised of the public housing-Abraham adesanya estate (572 housing units), private housing -crown estate (104 housing units), private corporate housing -raji rasaki estate (142 housing units), and public-private partnership housing - elegant court estate (72 housing units). Out of the 89 questionnaires administered to households' respondents in all four housing estate typologies, only 80 households returned the completed questionnaire, indicating 89.8% response rates of the total samples obtained, see table 2.4.

### Housing development actors/partners sample size:

They were drawn with specific criteria from the public and private sector with a sample frame of 46 REDAN members. The criteria was that each of the 46 REDAN (housing development actor/partner) must have built a private or public-private housing estate typology with more than 50 single-family dwelling units in the last 10years. The study identified 30 of such housing development actors/partners and 30 questionnaires were administered. Out of the 30 questionnaires administered to the housing development actors/partners, only 20 respondents indicating 66.6% response rates of the total samples obtained, see table 2.5.

### Housing development experts sample size:

The study set out two criterions for selection of housing development experts. Respondents must have lived in Lagos for more than 20years and must own a house in Lagos through one of the four estate origination typologies and must be within the professions (APBN, AEC) or must have experienced the employment categories stated in the questionnaire.

A total of 300-housing experts were generated from the available listings of Association of Professional Bodies of Nigeria (APBN). 30 professionals from the built environment professions were purposively selected. Out of the 30 questionnaires administered to the housing development experts who were respondents, only 24 indicating 80% response rates of the total samples were obtained.

Based on the sample design as above, the sample sizes for three structured questionnaires were generated for the fieldwork as shown below.

**Table 2.4 Sample sizes** (households from four-estate typologies)

| Estate typology            | Location of estate | Nos. of single-family dwelling units(population of households) | Sample size (Household questionnaire) | Estate name              |
|----------------------------|--------------------|--|---------------------------------------|--------------------------|
| Public estate              | Lekki-epe axis     | 572  | 56.(1 missing)                        | Abraham adesanyan estate |
| Private                    | Lekki-epe axis     | 104  | 11                                    | Crown estate             |
| Public-corporate           | Badagry-axis       | 142  | 14                                    | Raji rasaki estate       |
| Public-private Partnership | Lekki-epe axis     | 72   | 7                                     | Elegant court estate     |
|                            |                    | 890  | 88                                    |                          |

Source: Author

**Table 2.5 Sample size** (housing development actors/partners and Housing experts)

| Informant group                   | Population of informant group | Sample size | Response rate |
|-----------------------------------|-------------------------------|-------------|---------------|
| Housing development actor/partner | 46                            | 30          | 20            |
| Housing experts                   | 300                           | 30          | 24            |
| Total                             | 346                           | 60          | 44 responses  |

Source: Author

### 2.6.1 The Households

The respondents were selected from the four types of housing estate representing the typology in terms of the initiation of the estate as either public, public-corporate, private, and public-private and in terms of the variations in the involvement of actors/partners. The disparity in the housing pricing from the high-income earners characterized by the expatriate community as previously described was excluded while the middle to low income earners as seen in the

larger Lagos society of mainly indigenes shall be the focus of this research. Hence, the selection of study areas in exclusion of luxury housing as seen in Ikoyi and Victoria island majorly. Therefore, household affordability for the middle-income is defined by the property price. This study obtained property prices from advertised property prices as follows; The Guardian newspaper,-property section, castles properties, The Punch property and listings of real estate agents who are experts and REDAN members housing sales flyers. This ranges from N45million (\$300,000USD) to N5million (\$33,333USD) within the ten-year period of this study of estate typologies (1999-2009).

This disparity is a reflection of the middle -income earner based on all existing financing arrangement available. A description of this group as earners of between N250,000 (\$1,667USD) and N450,000(\$3,000USD) per annum by most researchers is misleading (Mabogunje,1999, Windapo, 2005, FOS,2004). This is the general government benchmark for stipulating target housing across the country. Available statistics gives an overview as follows:

- that about 74.3% of Lagos housing is rooming housing and 21.8% apartment flats type (smith,1978;LASG,2003;Mabogunje,1992;FOS,2004).

- that about 67.7% of urban Nigerians are non-poor from poverty headcount in percentage by sector (FOS, 2004).

- From poverty incidence statistics, relative poverty line by state shows that Lagos has 88.19% non-poor; and per capita relative poverty for Lagos is 56.7% (FOS, 2004).Which is well above average and almost equal in percentage to rental tenure of Lagos estimated as 57% of housing stock (LASG,2003).

It is imperative to note that from LASG (2003) surveys out of the 21.8% apartment flats of housing stock in Lagos, which is essentially the middle-income group (since FOS (2004) surveys estimates 88.19% of Lagosians as non-poor), and 57% represents rental tenure 9LASG,2003), then remainder housing stock of 43% is owner occupied.

Therefore, 57% of all households in current rental tenure arrangements would want to own their homes and the plausibility of their accepting a three-bedroom house, flat or town house is high. This indicates that in every 10 households 5.7 could apply for ownership tenure (this does not represent or imply effective demand by households).

However, in the selection of households from four-estate typology, this data above informed the purposive/ judgmental technique and improved the credibility of the selection that six (6) in

every ten (10) household is a potential applicant for housing from among middle-income groups within a given sample size.

### **2.6.2 The Housing Development Actors/Partners**

The selection of this group is from REDAN members by purposive/judgmental technique. The characteristics are as discussed earlier.

### **2.6.3 The Housing Development Experts**

The housing experts are of two types: The public sector and private sector housing development experts. Their characteristics are as previously set out.

## **2.7 Pilot Study**

The pilot study conducted set out the impact and credibility of all the questionnaires (types A, B, and C) as follows:

-To ascertain duration for respondents/informants to complete the questionnaires and answer the questions set forth respectively. It took respondents 15-20 minutes to answer all questions in questionnaire type-A. While, Questionnaire types B and C took respondents an average of 10-15minutes. This was so because most respondents of questionnaire types B and C were highly knowledgeable in the housing issues and were able to answer directly with little assistance. Most respondents to questionnaire type-A needed explanations and clarifications and were less approachable given current security status of Nigeria and especially Lagos.

-To ascertain clarity in the instructions contained in the questionnaires.

-To ascertain the degree of objections to questions asked.

-To observe the ease with which the questionnaire layout is readable.

-To take note of comments that would refine the questions asked.

A submission of the questionnaires to the school of post-graduate studies for ethics appraisal and validation through the coordinator/supervisor improved the questions and instructions structure. Three senior researchers in the built environment profession also reviewed all questionnaires. These criticisms and reviews modified and improved the content of the questionnaires.

## **2.8 Research Instruments**

Research instruments developed were to solve the research problems as follows:

### **2.8.1 Oral Interview**

The informant interviews were used to extract information's among housing experts and housing development actors/partners. This was done in a relaxed condition as a form of discussion. This was to ensure that informants were not under excessive pressure to disclose personal data and opinion. Through the oral interviews pictorial and drawing based materials was solicited as often times most experts have documentary evidence of situations and facts in their possession that are not readily obtainable from libraries and archives.

### **2.8.2 Structured Questionnaires**

The structured questionnaires are in sections that characterizes the quantifiable and non-quantifiable variables been investigated. They supplement the oral interviews as instruments for the research.

(See appendix I, II, III)

## **2.9 Structure of the Questionnaire**

The questionnaires are based on the need to obtain data from three different groups considered to influence the housing delivery systems and the arrangements among partners. Therefore, one set of questionnaires was developed for each group.

Questionnaire type-A was directed at the households who inhabited the four housing estate typologies. The second questionnaire type-B was directed at housing development actors/partners whose input was relevant as the implementers of the housing delivery systems. The third questionnaire type-C was directed at the housing experts, whose opinion is thought to influences the institutional and organizational arrangements in housing delivery systems. While the literature review served as a reference for the development of the questionnaires and the delineation of the target groups thought to be relevant in the housing delivery system of Lagos, the questionnaires were used as the primary source of data for analysis and validation. The questions were closed and open ended as the subject under investigation is very subjective in terms of underlying socio- cultural characteristics. The closed-ended questions sort a yes or no answers, applicable or not applicable, important or not important. While the open-ended



questions encouraged respondents to provide explanatory and free responses. Opinion questions that were based on a list of items from which respondents were to select were also asked.

A five point rating scale was adopted to enable the respondent express agreements or disagreements on a scale. The ranking of closed or open ended questions were such that it allows respondents to make choices on attitudes in order of importance and preferences. The structure of the questionnaire sought to elucidate the determinants of housing delivery systems, public private partnerships, and adequate housing delivery.

### **2.9.1 Validation of the Questionnaire**

The questionnaires were administered to the three groups of respondents within the sample frame. Questionnaire type-A was administered to households in the four-typology estates which represents the types of housing delivery systems. Type-B was administered to housing development partners/actors. Type-C questionnaires were administered to housing development experts.

A pilot study was carried out where three householders, three REDAN developers, three senior construction industry professionals, and three lecturers, independently participated in answering the questions. This was to ascertain the level of response accuracy as expected by the questions set forth. Necessary changes that arose from criticism and feedback were made to improve the structured questionnaires.

Questionnaire type-A comprised of twenty-six questions. The questions were designed to measure the household profile, ascertain affordability, nature of tenure, preferences in terms of planning-design typology, cost, and process function applicability for their choice of HDS.

Questionnaire type-B consisted of fifteen questions. They were designed to ascertain the profile of housing development partners/actors, their motivation for estate development, and the influences that determine their choice of HDS in relation to partnership arrangements.

Questionnaire type-C comprises of fourteen questions, which were designed to capture the influences of housing development experts on the overall AHD of Lagos.

### **2.9.2 Reliability of the Questionnaires**

The accuracy of the instruments for making the measurements was tested and was found to be satisfactory. The answers that were sought after from the questions asked were accurate for

several questions. Where clarity was needed, they were provided through explanations especially for not so literate respondents.

## 2.10 Research Variables and Measurements

Table 2.6 shows the three determinants in this study and the measurements adopted.

**Table 2.6** Research Variables and Measurements

| RESEARCH VARIABLES  | MEASUREMENTS  |
|---|---|
| Determinants of Housing Delivery Systems(HDS)<br>- Housing Design preference/taste<br>- provision of infrastructure<br>- Household income<br>- levels of building activity regulations<br>- tenure<br>- process costs<br>- typology (layout/design) | Questionnaires ,informant interviews, observations and secondary data sources.  |
| Determinants of Public-Private Partnership (PPP)  | Questionnaire, Secondary data, interviews, observations from site investigation |
| Determinants of Adequate Housing Delivery (AHD)   | Questionnaire, informant interviews, secondary data                             |

Source: Author

### 2.10.1 Determinants of Housing Delivery Systems

2.10.1.1 Household income (VA8/9): Since the respondents already occupied estates designated middle-income, they were asked to specify their source of income and the range of income to ascertain their funding arrangements in relation to affordability.

2.10.1.2 Provision of Infrastructure (VA18/22): within these questions, the respondents were asked on a scale of one to five the importance of infrastructure provision.

2.10.1.3 Level of building activity regulations (VA19): Respondents were asked to express how building regulations affect their choice of HDS.

2.10.1.4 Process costs (VA19):This question sought to ascertain if the choice of HDS was a result of excessive regulatory costs associated with due process on the part of the householders need for compliance to standards set out by institutions and organizations.

2.10.1.5 Typology (Layout/Design VA14-15): Four categories of estate layout typology, which typifies the estate typology, were used to ascertain current occupation and preferences of householders. These were matched against five types of house design typology to ascertain householders' preference.

2.10.1.6 Tenure (VA1): The household respondents were asked to specify the applicable tenure from five known types, which occur within the estate typologies. This is a measure of the arrangements among householders and in relation to institutions.

## **2.10.2 Determinants of Public-Private Partnerships**

2.10.2.1 Access to Land (VB5/7): The respondents were asked to specify the nature of tenure, which they have in the housing estate they have developed. This was in a view to establish the relationship between access to land and the actual housing estates they have established and the preferred choice of partnership utilized.

2.10.2.2 Actors/Partners Profit motive (VB11): The respondents we asked to specify their profit motive in percentage of monetary benefits. This was measured by data obtained from the average cost of construction of houses in estate typology within this period under investigation (1999-2009) and the sale price in the open market of the same housing.

2.10.2.3 Provision of Infrastructure by Public sector (VB6):The respondents were asked to specify the quality of infrastructure if provided would be a motivation for their choice of partnership as a HDS.

2.10.2.4 Access to Financing (VB10): The respondents were asked to state their preferred choice for funding their housing estate projects. This was to ascertain the impact of funding on the overall nature of partnerships.

2.10.2.5 Property Price (VB8/9/13): These questions sought to ascertain if property price is a motivation for actors/partners involvement in PPP.

2.10.2.6 Levels of actors/partners commitment (VB12): This question sought to measure their levels of commitment based on selected attributes of resources, processes, and outcomes

## **2.10.3 Determinants of Adequate Housing Delivery**

2.10.3.1 Quantity of housing (VB14): This data deduced and measured the optimal output of estimates for number of housing based on the level of technology utilized by housing development actors/partners against the size of estates they were able to establish during the period examined for the study.

2.10.3.2 Quality of housing (VA24/VC8): Respondents were asked to ascertain their preferred housing quality expectations. This was matched with those of the housing development experts' perception of standards (VC8). Both data were used to ascertain the quality of housing for the householder and the housing development actor/partner.

2.10.3.3 Quality of Life/ Housing Environment (VA22): The respondents from households were asked to indicate the importance of qualities like location of estate to a central business district, preference for government or private planned estates, provision of basic amenities, availability of recreation facilities, lawn and green areas, sidewalks and the likes to their perception of quality of life.

2.10.3.4 Levels of actors/partners commitment (VB12/15): These questions sought to measure their levels of commitment based on selected attributes of resources, processes, outcomes and commitment to government policy in line with existing operational framework.

## **2.11 Procedures for Data Collection**

The methods used for the collection of data are as follows; the use of questionnaires, personal interviews, secondary data, photographs, drawings and physical site observations.

### **2.11.1 Use of Questionnaires**

Three questionnaire types A, B and C were used to extract information from three categories of respondents namely; the householders, the housing development actors/partners and the housing development experts in the city of Lagos.

### **2.11.2 Personal interviews**

These were conducted alongside the structured questionnaires to ensure that basic information's were extracted from respondents and areas of difficulty were clearly explained.

### **2.11.3 Use of secondary data**

Secondary data from credible published sources were gathered from the National Planning commission, Federal office of statistics, Central Bank of Nigeria, Federal Mortgage Bank of Nigeria, REDAN publications, Mortgage Banks, and Lagos state government.

2.11.4 Use of photos, Drawings and physical examinations: The use of photographs of existing estates were actual photos depicting as is conditions; while drawings of building design

typology were obtained from the Nigerian Railways Corporation (NRC), University Of Lagos and site measurements were done by the researcher.

## **2.12 Variables and Controls used in the Study**

The identified variables were used to test the hypotheses and control measures were put in place to monitor the devices. Table 2.7 shows the comprehensive list of independent variables in this study with their codes.

### **1. Variables for testing Hypothesis-1**

Factors such as Housing Design preference/taste, provision of infrastructure, Household income, levels of building activity regulations, tenure, process costs, and typology (layout/design) are not the main determinants of Housing Delivery Systems (HDS) of Housing Development Actors/Partners in Lagos.

### **2. Controls for Hypothesis-1**

Acceptable standards published in the open literature by recognized authorities were used as monitoring device for each factor.

### **3. Variables for testing Hypothesis-2**

Factors such as Provision of infrastructure, Property Price, Access to financing, Access to Land, profit motive and levels of actors/partners commitment are not the main determinants of Public-Private Partnerships contributions.

The dependent variable was 'Partnerships' a subset of 'housing delivery system'(HDS);while the independent variables were identified as profit motive, provision of infrastructure, access to financing, access to location and levels of partners commitment. The independent variables were measured by standards published in the open literature by recognized authorities.

### **4. Controls for Hypothesis-2**

The ranked controls were tested as determinants of public-private partnerships' contributions using the housing development actors/partners among selected sample frame.

### **5. Variables for testing Hypothesis-3**

Differences in housing delivery systems of actors/partners arrangements such as tenure, government policy, and factors of land value are not the determinants of design/layout-Typology.

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#### 6. Controls used for hypothesis-3

The Controls used were the specimens of layout and design typologies from pre-colonial to post colonial era, which depicts the single-family estate layout, and house design. These sets of typologies were then tested to see if there are any significant differences between then and now and how they have influenced actors/partners arrangements.

#### 7. Variables for testing Hypothesis-4

Changes in future levels of actors/partners commitment cannot predict changes in levels of building activity regulations and design/layout-Typology.

The independent variables for hypothesis-4 were 'profit motive', access to land, and government policy and partners commitment. The dependent variables were quantity of housing, quality of housing and quality of housing environment. This hypothesis sought to ascertain if the independent variables could predict the future levels of the dependent variables.

#### 8. Controls used for Hypothesis-4

The control used were ranked to see if the independent variables are considered first as determinants of partners commitment; then secondary data were used to establish the levels of adequacy and primary data from householders, housing development actors/partners and housing development experts were used. The result of the testing for hypothesis-4 was a modeling for Adequacy Evaluation Technique (AET) based on the dependent variables, which served as control for predicting future levels of actors/ partners commitment.

### **2.13 Method of Data Analysis**

A data analysis sheet was prepared using data extracted from the returned questionnaires A,B and C. The scale of data obtained was nominal, ordinal, ratio, and interval. The data was analyzed with Epi-info statistical software version 3.5.1.and SPSS-15.The Variables were presented by frequency tables, pie charts, bar charts, and cross-tabulations. Odd ratio with 95% confidence interval and Fisher's exact test were used to test the associations between the essential elements of Housing Delivery System (HDS) and the possible determinants as well as the desirable factors.

The use of Fisher's exact test was against the backdrop of similar studies already sighted in this research, which were empirical and theoretical in the test association for significance among variables.

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**Table 2.7 List of independent variables**

| Serial Nos. | Code | Variables   | Serial nos | code | Variables                                 |
|-------------|------|---|------------|------|---|
| 1           | A1   | Tenure  | 47         | C6   | Perception of PPP                         |
| 2           | A2   | Age   | 48         | C7   | PPP preferences                           |
| 3           | A3   | Gender  | 49         | C8   | Building regulation and standards         |
| 4           | A4   | Marital status  | 50         | C9   | Perception of single family housing       |
| 5           | A5   | Dependants' categories  | 51         | C10  | Current Role of professionals             |
| 6           | A6   | Household size  | 52         | C11  | Development criteria                      |
| 7           | A7   | Level of education  | 53         | C12  | Impact of design/layout typologies on HDS |
| 8           | A8   | Monthly income level  | 54         | C13  |   |
| 9           | A9   | Source of income  | 55         | C14  |   |
| 10          | A10  | Employment type   |            |      |   |
| 11          | A11  | Work related stay in Lagos                                      |            |      |   |
| 12          | A12  | Religion  |            |      |   |
| 13          | A13  | State of origin   |            |      |   |
| 14          | A14  | Dwelling layout arrangements                                    |            |      |   |
| 15          | A15  | Dwelling design typology  |            |      |   |
| 16          | A16  | House acquisition   |            |      |   |
| 17          | A17  | Acquisition costs   |            |      |   |
| 18          | A18  | Process function applicability                                  |            |      |   |
| 19          | A19  | Impact of building regulation                                   |            |      |   |
| 20          | A20  | Effect of Process cost  |            |      |   |
| 21          | A21  | Life style-size assessment                                      |            |      |   |
| 22          | A22  | Perception of Housing environment                               |            |      |   |
| 23          | A23  | Estate size   |            |      |   |
| 24          | A24  | Material quality assessment                                     |            |      |   |
| 25          | A25  | Design Quality assessment                                       |            |      |   |
| 26          | A26  | Organizational arrangements                                     |            |      |   |
| 27          | B1   | Name and location of the estate                                 |            |      |   |
| 28          | B2   | Estate typology   |            |      |   |
| 29          | B3   | Age of the estate (periods are representative of policy epochs) |            |      |   |
| 30          | B4   | Age of the firm   |            |      |   |
| 31          | B5   | Tenure of estate  |            |      |   |
| 32          | B6   | Infrastructure provision by public sector                       |            |      |   |
| 33          | B7   | Access to land  |            |      |   |
| 34          | B8   | Location  |            |      |   |
| 35          | B9   | Cost of foreign exchange  |            |      |   |
| 36          | B10  | Source of funding   |            |      |   |
| 37          | B11  | Actors profit motive  |            |      |   |
| 38          | B12  | Actors/partners commitment                                      |            |      |   |
| 39          | B13  | Construction cost   |            |      |   |
| 40          | B14  | Level of technology   |            |      |   |
| 41          | B15  | Government policy requirements                                  |            |      |   |
| 42          | C1   | Social Sector of partners arrangement                           |            |      |   |
| 43          | C2   | Partners profession   |            |      |   |
| 44          | C3   | Professional experience   |            |      |   |
| 45          | C4   | academic qualification  |            |      |   |
| 46          | C5   | Involvement   |            |      |   |

(Source, Author)

The data in relation to each objective were then analyzed as follows:

### **Objective - 1**

The results was tested for determinants of the housing delivery systems(HDS) with the Fisher's exact test; in terms of Housing Design preference/taste, provision of infrastructure, Household income, levels of building activity regulations, tenure, process costs, and typology (layout/design).

### **Objective-2**

The determinants of actors/partners arrangements in the housing delivery systems of Lagos in each of the four-estate typologies were tested with the Fisher's exact test: Then, reduced to two for computation of the odd ratio. This was in order to find out if there are any association between partners' arrangements and the housing delivery system of choice among housing development actors/partners between the public and the private: And to find out if there is any association between levels of partners' commitment.

### **Objective-3**

The data obtained was investigated to see if there was any significant difference in the perception of housing development experts, housing development actors/partners, and household. In terms of major preferences, tastes, and lifestyle that influences the housing environment; this was achieved using the Fisher's exact test; and if there are major differences in the objectives of actors/partners, their housing delivery systems and architectural typology.

### **Objective-4**

The data obtained analyzed to find out the main determinants of public-private partnerships in housing delivery:

Objective-4 was further investigated through the development of predictive models for evaluating future levels of adequate housing delivery among actors/partners. Significance levels of  $P=0.05$  was the datum and variables which failed to meet this level were removed from model. The remaining variables were used in developing Adequacy evaluation techniques (AET) as a predictor model for PPP and adequate Housing Delivery(AHD).The overall significance of the model was tested using the Fishers exact p-value: By using the standard error of estimate, residual analysis and exponential smoothing with trend adjustments, the reliability and accuracy of the models were improved.

## **2.13.1 The Basic of GST Linear Equations**

### **1. The Equations**

This research generally based its form of GST Linear equation as follows;

$$Y=a+b_1x_1+b_2x_2+\dots b_k x_k$$


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Where,  $Y$  is the dependent variable to be estimated,  $x_1, x_2, \dots, x_k$  are the  $(k)$  independent variables; 'a' is the intercept value that reveals the  $Y$  predicted value when  $x=0$

The corresponding coefficients for the  $K$  independent variables are  $b_1, b_2, \dots, b_k$

It is the partial change in  $b_1$ , which signifies a change in the  $Y$  value, and this corresponds to a change of a unit in  $x_1$  where  $x_2 \dots x_k$  remain constant.

In essence, when applied to HDS,

Consider equation (1)

$$H = P + T + A = X$$

Or

$$H = \sum_{i=1}^3 x_i \dots \dots \dots (2)$$

Where  $X_1 = P$ ,  $X_2 = T$  and  $X_3 = A$  and  $H$  is HDS,  $P$  is PPP,  $T$  is Housing layout/design typology and  $A$  is AHD.

Therefore the sum of the variables determining HDS, is equal to the sum of the variables determining PPP, AHD which includes the housing layout/design typology.

This relationship exists and can be measured using simple to complex GST Linear equations, which creates the platform for evaluating the entire HDS yet capturing its integral elements.

### 2.13.2 Predictive Linear Models (of HDS, PPP AHD)

Based on the works of past research in the field of general systems theory (GST), a linear model that describes the relationships between HDS, PPP, and AHD is proposed for a better understanding of this study. The linear model takes its origins from the structure of a system as proposed by Bertalanffy, (Bello, 1985).

Linear equation of a single relationship;

$$X_1 = F_1(X_1, X_2 \dots X_n)$$

$$X_2 = F_2(X_1, X_2 \dots X_n)$$

$$X_n = F_n(X_1, X_2 \dots X_n)$$

Where  $X_i = 1, 2, \dots, n$ , is the first derivative  $X_i$ .

Then, Let  $P$  be defined as PPP an element of HDS, then  $P$  is a function of  $P_i$ ,  $i = 1, 2, 3, \dots, 12$  i.e.,

$$P = \sum_{X_i=1}^{12} P_n$$

*Where  $i = 1, 2, 3 \dots 12$  are the individual determinants of  $P$*

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This research provides fifteen variables as leading indicators of the level of partnering among housing development actor/partners namely: location of estate, estate typology, tenure, provision of infrastructure, access to land, age of estate and firm, cost of construction, cost of foreign exchange, source of funding, profit motive, level of technology-in use, government policy. Assuming a linear relationship between levels of partnership and development actor/partners variable, then the model can be stated as follows;

If  $VP_1$  is the estimated level of partnership,

$C_0$  is the constant term

While,  $C_1, C_2, C_3$  are regression coefficients to be estimated

Then,  $VP_2, VP_3, VP_4, VP_5$ , etc are estimated indicators of level of partnership from resource optimization and the process optimization elements of PPP.

i.e,

$$VP_1 = C_0 + C_1 VP_2 + C_2 VP_3 + C_3 VP_4 + C_4 VP_5 + C_5 VP_6 + C_6 VP_7 + C_7 VP_8 + C_8 VP_9 + C_9 VP_{10} + C_{10} VP_{11} + C_{11} VP_{12} + C_{12} VP_{13}$$

### 2.13.3 Validation of the Model

This research uses a validation technique, which allows for the testing of predictions obtained from fresh data. This is preferred to two other options in the open literature often used, namely, the analysis of model coefficients and data splitting. In order to achieve correctness, the new data must indicate that the Fisher's exact p-values are proximal to chi-square values for variables in association, which in turn are validated by the prior plausibility of the supportive literature: By so the data obtained is conclusive on the qualitative and quantitative terms.

## 2.14 Characteristics/nature of Variables in the Study

### 2.14.1 House Design preference/taste

This is the house design typology, which is largely normative (Rapoport, 2001). This differs from each other by the neighbourhood/planning layout typology (government or private) and the house form (single house form in its variations) and the courtyard house form, often perceived and expressed as syncretism (Aradeon, 1991; Rapoport, 2001; Smith, 1978). This study categorizes the typology of house unit as a measure of adequacy and has five types (on per plot basis) namely; single family-bungalow, single family storey, single family rooming, single family flat and multi-family block (high or mid-rise, which caters for more than single family; includes block of flats, terraces etc).

#### 2.14.2 Construction Technology

This variable is measured by the levels of mechanized or humanized activity utilized in the process of housing delivery. Olusanya (1992) identifies three major types of technology on their value added basis; they are local/manual, intermediate, or high technology.

#### 2.14.3 Process Cost

This variable is the stages in housing delivery. Siram et al. (2001) identified four stages; the planning, land assembly development and implementation and disposal. All four stages summarize the nine-process function of Prins (1994) and other proponents of the housing delivery process (Turner, 1972, Ogu, 2000). The entire processes involve capital costs and fees in return for asset, services or approvals/taxes and time costs on the part of households and actors/partners. These costs often make the entire delivery process cumbersome. A table of these activities in Nigeria was formulated giving an indication of the process, lead time and approximate costs; which this study would adopt as process costs for the housing process excluding the construction related costs (see table 3.8.2). Alternative approach is to assume the period and benchmark against man/hour cost to compute the process costs.

#### 2.14.4 Quality/ Housing Environment

The 'settings' for housing is defined as the housing environment (Rapoport, 2001) and it is a measure of the quality of life (or living) and the physical structural soundness of the building as well as sanitation, Bourne (1981). In this study, quality of life and quality of housing environment has been bundled to identify the patterns, linkages and forms of interaction between environment and behavior, including their mechanisms (Rapoport, 2001).

#### 2.14.5 Layout typology

Aradeon (1982) identified two types of layout, which forms the basis for the physical development process of housing and the measurement of this variable. The two types of layout typology are the government layout and the private layout at the planning level. The sequence of events that would unravel in the course of physical development as part of the housing process are determined to large extents by the choice of consumers at this stage.

#### 2.14.6 Contracting Conditions

This variable ascertains the nature of the conditions of the contract under which contractors/subcontractors would have to perform their task of building construction. The terms of reference is the value for money invested by actors/partners and households where applicable. This involves a favourable contracting condition as against a less favourable

contracting condition, which excludes profitability and measures basic conventional conditions of contract implicitly; there are four different stages of the works namely; mobilization, procurement, execution and demobilization.

#### 2.14.7 Cost of foreign exchange

This is a measure of design specific typology, which in reality relates to the lifestyle of the people as occasioned by legislation. Since 70% of building material used in modern housing in Lagos are imported in two ways namely; as finished products, or inputs for local production. More so, about 90% of manufacturing of building materials in relation to 'inputs for local production' depends on expatriate technology and skills (as well as owned/operated by expatriates). Therefore, foreign exchange is a major index in the construction industry of Lagos and Nigeria. Since importation of building materials and repatriation of profit from produced materials locally adversely affects local foreign exchange reserves. This variable ascertains the level of dependence on foreign exchange from preferences in building material and technology choices often made to achieve housing.

#### 2.14.8 Household Characteristics

It is a measure of age group, income group, employment/carrier group, religion group, ethnicity, and all the characteristics that makes for household uniqueness. This is important to reflect the tendencies of households. The ability of households to access housing in urban centers are often traceable to their networks and these networks are in direct relation to the household characteristics. Socially, this may be class distinctions based on economy, ethnicity, political associations, religious associations, and the likes. These formations describe the housing characteristics and enclaves of social life as perceived in Lagos (Aradeon,1981).For instance, household size for the western civilization is agreed as a maximum of 2persons per room(WorldBank,1993). However, Aradeon (1978) identified the Nigerian family as comprising, the father, and mother, at least four children, a house cleaner and most time a driver and a family relative. This totals about eight (8) persons for the average middle- income household. This variable elucidates the households configuration that typifies the identity of those the planned objectives intends to cater for in terms of housing adequacy. This variable is in groups of households' personalities in relation to the head of the household.

#### 2.14.9 Architectural design typology

This variable differentiates the functions of the single house form, as space defined activity or as an activity defined space.

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The transition between the pre-colonial, colonial, and post colonial currently exhibits this duality of function in the single house form. The measure of design typology in terms of functional space and architectural characterization is crucial to understanding the criteria for target housing among the middle-income. The implication for this variable includes a measure of the size of spaces, type of construction material and the guiding conceptual function of spatial classification for target consumption such as flat(by number of bedrooms), rooming, semi-detached house, detached/single house, and terrace/town house. These design typologies elucidates the levels of syncretism in which housing presents itself to satisfy technical, social and psychological needs of interests.

#### 2.14.10 Access to occupancy/allocation

Housing access is by inheritance, purchase, or allocation. The public sector is often by allocation based on undisclosed methods, and sometimes by lottery in favour of a selection of groups based on income, since the income parameter for access to occupancy is a traditional basis for purchase and allocation in most public based housing. However, in the private sector it is strictly on a cash and carry basis. By ascertaining, the method by which respondents obtained access to occupancy the study elucidate this to what extent this traditional income based selection benefits the target household set out in the housing objectives.

#### 2.14.11 Housing maintenance and management

The variable often characterizes the traceable need of society to cater for the services and the affairs of the surrounding premises to the housing as well as the utilization of these services in a manner that is sustainable. This is evident in the presence of estate associations within the communal enclave whose responsibilities include; security, cleaning, enforcement localized rules and general levels of acceptable behaviours. The presence of these items of responsibilities undertaken by the estate association forms the measurement for the variable. This is to ascertain the correlation between housing environment and the identified PPP typology.

#### 2.14.12 Location of Housing

In this case, the linear distance of the housing from the central business district of the city and the level of cumbersomeness associated with commuting/driving for most the surveyed residents of housing estates. Since trading, and white-collar jobs are the predominant stay of most middle to low income earners in Lagos and these jobs are centrally located in central business districts (NBS, 2009).

#### 2.14.13 Levels of Actors/Partners' Commitment

This is a measure of the partnership between developer and government on a development project/housing and the extent that they are committed to achieving set out goals and objectives. This is measureable in terms of target number of housing produced, sale price set out to be delivered to consumers, the terms of partnership and resource allocation by partners and the level of incentives which dampens the need for accumulation of surplus value by private sector actors/partners. This is a measure of the general commitment to government objectives for housing as a private sector partner.

#### 2.14.14 Provision of Infrastructure

The provision of electricity, water, sewage, drainage, roads, and refuse storage/ disposal (Bourne, 1981) as the general description of infrastructure for assess to housing. Any housing with less than two of these is inadequate in infrastructure provision by this study.

#### 2.14.15 Profit Motive of Partners

Marxist theory describes this as surplus value (Pugh, 1980), and recent proponents of PPP such as Akitoye and Skitmore (1994), have identified it as the difference in the value of outputs and inputs and output price/input cost ratio. In a market economy, it is usual for the private sector developer to project on the cost benefit of the investment called the return on investment (ROI). Sometimes, for the public sector the issue is cost-recovery and not profit, where they do not intend to subsidize the housing. Therefore, the bundling of profit motive would help in creating a balance between the public sector social, political and economic objectives within the strictly private sector economic objectives by the public sector creating other incentives which the private sector would utilize to recover cost as well as obtain profit. This is expressed in a range of profitability percentages that would serve to ascertain the profitability range for actors/partners that would motivate them to engage or initiate a housing development by infusing their private equity.

#### 2.14.16 Non Profit Motive of actors/partners

These are essentially social inclinations brought to bear by the public sector objectives. They could be political, such as the need for government to meet the demands of a particular social group. These non-profit motives radically induce private sector actors/ partners to look elsewhere within the housing process for profit based gratifications legitimately and illegitimately. Therefore, the incentives that should downsize the effect of the need for profit cited in the literature forms the basis for this measurement.

#### 2.14.17 Access to Land

By legislation, the Land used Decree transfers land in trust to the Federal republic of Nigeria. Therefore, land distribution for housing to public and private sector is by allocation. However, the rights/titles, access to occupancy and transfer of these rights are not as straightforward. Aradeon (1987) identified the land use system in terms of proportioning and distribution of land for purposes such as housing, commerce and industry and public services (e.g. schools, hospitals, etc). Such verbal descriptions of planning intentions are usually never in synchrony with the realities in Lagos. Therefore, access to land shall be in terms of allocation.

#### 2.14.18 Property Price

This was determined by supply and demand (Bourne, 1981; Hua, 1996). The measure of this trend can be obtained from current land and property costs among actors/partners and expressed in per square meter cost.

#### 2.14.19 Access to financing

Ojo (2005) observed that the cumbersomeness of obtaining housing finance from the apex mortgage institution by individuals has forced many would be homeowners to seek alternative housing finance sources. Even in the event of overcoming this obstacle, there is the problem of liquidity by the PMI's. The Central Bank of Nigeria has direct money supply indices from its annual report.

#### 2.14.20 Construction Costs

Generally, it is a measure of tender price index. This would be misleading as the generalized application here would infer the large-scale construction companies (which are expatriates). and this is not applicable to the mass of housing in the market economy as a clear indicator of the trend. Therefore, this research shall obtain direct cost of housing units from developers and contractors who form the bulk of middle to low income housing contractors and utilize the average cost per square meter to arrive at a reasonable value.

#### 2.14.21 Sources of financing

The various sources of financing available to households and housing development actors/partners shall form the basis for this variable. The housing development actors/partners usually source their fund from savings and financial institutions while most households rely more on savings and family/thrift based contributions. The level of completeness of housing is an indicator of the funding structure. Relative levels of completion observed in public and private estates are based on the building elements and infrastructure.

#### 2.14.22 Household income

Mabogunje (1999, 2002) have utilized 30% of income to compute the repayment plan and age alongside likely income for the Grade level 10 Federal civil service worker as the middle-income earner; supported by ILO documents for housing repayments. Hence, a measure of affordability is 30% of income.

#### 2.14.23 Tenure

This is the rights of occupancy against treats of eviction or encumbrance of all forms, whether its rental or ownership. The need to ascertain the security of tenure and the proof of such tenure can only be in relation to government terms such as; certificate of occupancy, deed of assignment/sublease. The availability of such document is an indicator of the investment potential available to ownership from which they can upgrade their housing, or venture into other business that would improve the quality of life. More so, tenure is not only a security for housing, but a determinant of likely partners/actors role in PPP (HarnndoDesoto,2003).

#### 2.14.24 Price of Building Materials

This is an indicator for profitability to the private sector and viability to the public sector and it is important to the levels of partnerships that would likely occur between both sectors and would influence the coalitions and arrangements among actors. The price obtained from published Guardian newspaper shall form the basis for this variable.

#### 2.14.25 Levels of building activity regulation

This involves the planning approval process and stages of authorization as earlier shown in the study as key determinants of partners' arrangement in the housing delivery system. Which includes the outcomes of decisions; since often times the determinants of partners' arrangement do not reflect the wishes and aspiration of the actors. Aradeon (2005), identifies planning intentions of the land-use system in Lagos as different from Land-use design which is the translation and interpretation of planning intentions as conditioned by the layout.

Therefore, there is the tendency to work within the frame of these non-dynamic regulations yet achieve profitability in terms of occupancy arrangements to recover cost and improve accumulation of surplus value simultaneously. To this end, the stages for building activity regulation as stated by the Lagos state planning Edict, 1969, forms the basis for evaluating this variable.



#### 2.14.26 Government Policies/Framework

The policy on partnerships clearly indicates that the private sector must provide proof of funding to benefit from land allocation, which they would obtain for a nominal fee, by providing a letter for funding the project from a reputable bank. Achieving the regulatory requirements does not imply adequacy of submission as well as guarantee that the project would be successful. The regulatory instruments for checking, and penalties in case of violation/misrepresentation is not clear. The measure of policy in terms of regulatory guidelines and frameworks/strategies for implementation was assessed for adequacy.

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## **CHAPTER THREE**

### **THEORITICAL AND CONCEPTUAL FRAMEWORK**

#### **3.1 Global Nature of HDS**

Housing and its built environment setting are basically co-joined in interaction and complexity, since housing performs an important role as a basic need (UNCHS, 1993) and the built environment remains the context and setting for its existence (Rapoport, 1983). To this extent, the impact of housing on the daily lives of the urban dweller becomes an issue. In most cities, housing has become an indicator of the quality of life and a status symbol of family within a society (Majama, et al, 2007; Venter, Marias, 2007; Harris, 1998). The economic importance of housing alongside its function and social relevance to man have been a source of intense debate in the last three decades globally (Brandsen, 2001). Exploratory and empirical studies show that housing delivery systems transcends the fields of sociology, economics, politics, and seldom architecture. The generalized viewpoint is that the architecture of housing emanates inadvertently as a product of other related theories. It is evident in practice that the very nature of housing demands a delivery system for actualization and the product is an architectural expression of space and form, in relation to context within which certain system of activities occur (Rapoport, 2001; Aradeon, 1991).

The basic house for human accommodation has experienced activity and technology based transitions. This is evident in the transformation of the basic house into concepts of housing, human settlement and shelter (Ogu, and Ogbuozobe, 2001; Ying, 1997). These transformations influenced a buildup of theoretical paradigms, which emanates from changes in the historic conditions of settings and systems of human activities (Rapoport, 2001). Central to the theoretical paradigms that abound in the housing debate is the need to express the 'house' in housing on cognitive architectural terms of expression as space and form (Aradeon, 1991, 1996). By so, these paradigm shifts created institutional pluralism and conflicts among stakeholders (Sanyal, 2001). To understand these dimensions of conflict in society the stakeholders' delineation must be clear in terms of the institutional and organizational arrangements that exist amidst power relations (Baradat, 1997; Brandsen, 2001; Ying, 1997).

The arrangements, which exist in the systems of activities within settings, are such that the transitions from the traditional to the cosmopolitan and now global remain variables to achieving housing. To this, the current practice among stakeholders favours a unified global approach, which is of necessity for economic and systemic reason; and advocacy in this direction abounds (UNCHS, 1993; Kemeny, 1992). The approaches and propositions of the World Bank, United Nations and Habitat internationals' and the ever changing framework for

adaptation by member countries remains a valid reference to the influence of changing historic conditions on housing.(Venter and Marais, 2007; Pugh, 1997,2001). It is evident that the outcomes of such global approaches are solutions that are less country and community specific; and this significantly accounts for the failure of capitalism, which is sacrosanct to economy-based housing paradigms (De Soto, 2000).

In addition, there is the complexity of housing instilled by the changing historic conditions of housing settings that emanates from changes in social inclinations called “*transitional nature of society*” (Aradeon, 2007:13). This accounts for human unsettlement and the need to create transitory perception to housing along new lines of social arrangements and settings (Buckminster, 1978). Unfortunately, housing remains a fixed space (Pugh, 1980). The implication of the fixed space in relation to meaning, context, settings, and influences of lifestyle remains a system of activities within which value subsist (Njoh, 2002; Smith, 1998; Robinson, 2002; Tipple, 1994; Keivani, 2001).

Attempts from studies shows the need to delineate clearly the interacting subjects, elements, and environments from which the basic house conception emanates into the new housing concepts from which a more public utilization occurs within the socio-cultural, economic, and political contexts. So far, there is no universally agreed basis for constructing such delineation. Often times, a review in an aspect of the resources or subjects will produce effects that were not envisaged in other resources and subjects, since the dynamic nature of societies, described, as ‘multi-polar world’ remains a limitation to any given theory of convergence or divergence (Kemeny, 1998; 2010).

For example, Aradeon(1978:331) observed in Nigeria,(Africa) that:

*“The objective of the (housing) policy prior to 1975(in Nigeria) reflected a strong bias towards the creation of an elitist class and the entrenchment of that class bias. British imperial and colonial traditions, along with British political and economic control, created a process of adaptation to British norms that in the process defined African elitist norms. The creation of the conjugal family lifestyle and private home ownership are the direct consequences of that policy.(Actually, to call these African elitist norms is a misnomer-they are unstable ,fluctuating from family to family and year to year in no clearly discernable pattern). Although a couple may have pretensions to having a nuclear family lifestyle, in reality dependent relatives often form an integral part of the household and overcrowd the elite homes(in terms of western standards of household size and sub-cultures as most elites do not complain or begrudge this phenomenon which traditionally depicts affluence).”*

In comparison, Rapoport (2001:154) observed in the United States of America (West) that:

*“Currently, while houses in the USA are becoming larger, living rooms are shrinking or even disappearing, having gone from being central to the dwelling to being of no importance, replaced by ‘family rooms’, linked to the kitchen; many new houses have none at all. Thus, in Celebration (a town in) Florida, behind the traditional facades, there are modern, single space interiors with, at most, vestigial living rooms for display or nostalgia. New values and norms result in new lifestyles affecting housing.”*

It is clear from the two examples above that changing lifestyle is a key thrust for actors/partners and the perceived and acceptable quality of life (which invariably stems from lifestyle) remains central to the housing debate irrespective of the theory and tradition. The notion that the theory precedes the lifestyle or the reverse remains a debate. Unfortunately, in Africa the broad generalization of the idiom “*traditional*” is in direct relation to construction materials rather than a broad based architectural theory and its application (Aradeon, 2007; Godwin, 2002). The use of thatch roof and mud walls literary depicts the ‘traditional’ about African architecture. Where ‘vernacular’ is used, it is in relation to copying the original, which originated elsewhere (Vlach, 1984; Rapoport, 2001). Yet there exist in Africa components of the concept of culture such as lifestyle in pockets of environment-settings and activity-settings which indeed is admissible as theory in architectural terms; since it expresses the space-form relationship thought to be a peoples housing identity. This neglected cognitive approach is due to notional stereotypes that insist on “selectionism” as the evolutionary process of housing in Africa and third world countries (Rapoport,2001), rather than the plausibility of evolutionary theories intrinsic to society by choice of lifestyle.

A further complexity of housing is evident in the issue of population explosion and general changes in urban demographics. As cities continue to increase in population, the necessary support structure in terms of housing, infrastructure, job creation and other sociological issues continue to become more complex. Table 3.1 shows the extent of world urban population explosion in the last fifty years and projected over a thirty year period and beyond. This gives a significant indication to the direction of global housing trends and the needs specifically. The rural-urban migration rate is high for both the more developed and less developed region which continues to increase over time and it is estimated that more than half of the worlds population will live in urban centers/cities by the year 2050 (UNCHS,2003). Since the more developed areas is almost saturated at about 73.9% of its population in urban centers as at year 2000. It is

obvious that for cities like Lagos in less developed region, there will be increased population by migration in the next 20 years.

**Table 3.1** Urban population size and distribution by major geographic area, 1950-2030

| Region                             | 1950  | 1975  | 2000  | 2030  |
|------------------------------------|-------|-------|-------|-------|
| Total population(million)          |       |       |       |       |
| World                              | 2,519 | 4,068 | 6,071 | 8,130 |
| More developed region <sup>a</sup> | 813   | 1,047 | 1,194 | 1,242 |
| Less developed region <sup>b</sup> | 280   | 3,021 | 4,877 | 6,888 |
| Rural population(million)          |       |       |       |       |
| world                              | 1,786 | 2,552 | 3,214 | 3,185 |
| More developed regions             | 386   | 344   | 311   | 228   |
| Less developed regions             | 1,400 | 2,208 | 2,902 | 2,958 |
| Urban population(millions)         |       |       |       |       |
| World                              | 733   | 1,516 | 2,857 | 4,945 |
| More developed regions             | 427   | 703   | 882   | 1,015 |
| Less developed regions             | 306   | 813   | 1,974 | 3,930 |
| %population in urban areas         |       |       |       |       |
| World                              | 29.1  | 37.3  | 47.1  | 60.8  |
| More developed regions             | 52.5  | 67.2  | 73.9  | 81.7  |
| Less develop[ed regions            | 17.9  | 26.9  | 40.5  | 57.1  |
| Distribution of urban population   |       |       |       |       |
| World                              | 100   | 100   | 100   | 100   |
| More developed regions             | 58.3  | 46.4  | 30.9  | 20.5  |
| Less developed regions             | 41.7  | 53.6  | 69.1  | 79.5  |

<sup>a</sup> the more developed regions are; Europe, North America, Australia/New Zealand and Japan

<sup>b</sup> the less developed regions are; Africa, Asia(except Japan), Latin America and Carribeans plus Melanasia, Micronesia and Polynesia

source: Cohen, 2006

Succinct to the global nature of housing delivery systems is urban governance. Since specific role of governance is prominent in most modern cities in relation to catering for socially heterogenous inhabitants with multi-dimensional needs. Again housing theories help to agglomerate “lifestyles”(thought to be an essential component of the concept of culture) and consolidate needs from which urban governance can deal with groups rather than individuals. The difficulty in housing is such that these groups exert multiplicity of wills in “needs” and “connectivity”(Rapoport, 2001; Aradeon, 1996; Muoghalu, 1984; Duanfang, 2007; Jepson, 2007).

To this end, various constituents of housing delivery systems have been identified in the open literature as; the actors, the housing process, the housing systems and the housing product and the existing housing environments (Turner, 1972; Angel, 2000; Cohen, 2004).

### 3.1.1 Developments in the architecture of HDS

In delineating a broad view of stakeholders in HDS, as an emerging consequence of “arrangements” and “settings” Turner, Fichter(1972) identified the three-classes of actors in the housing process namely the private sector (and general commercial, for profit), public sector (political power) and popular sector (users themselves, self-help, personal use). The housing process plays certain role’s by which specific material housing functions are determined which are not quantifiable (such as identity, security, and stimulus/opportunity) Turner, Fitcher (1972); and the housing process was further expatiated by Prins(1994) in identifying the nine process functions of HDS. All of these contributory factors influence the overall architectural design, which expresses the housing product and informs the housing process as well. The housing process is integral to the housing system as the process subsists within a specific system.

The housing system is dependent on the technological expertise (identified as knowledge base) as well as the market economics in specific terms and context (of location/settings). The housing system comprises of the arrangements implicit to the nature of regulatory institutions and organizational configurations. These are the public sector framework for housing delivery as the institutional arrangement, while the organizational arrangement is the social structure for coalition among stakeholders (Ying, 1997; Prins, 1994; Sanyal, 2001). It is upon this framework that architecture performs it functions to give expression to housing in form and space.

The housing product in itself as the house is a commodity and the variableness is obvious in the structure of socio-economic inequalities. These attributes are more obvious through urban planning’s consistency, in the use of legitimate rules presented as neutral for public interest. Whereby, rights and access in conjunction with standards are the suggestive tools, which lend credence to the arrangements for modern housing (Mabogunje, 1978). This inclination further establishes the use of the housing product as an indicator for explaining the myth of the science and the insincerity of societies’ widely accepted approach to modern housing arrangements in its lopsided approach which favours a few (UNCHS, 1993).

Moreover, the outcome of formal and informal housing arrangements has a visual effect on society itself and shows to what extent a people have been able to control the forces that make for their civilization. Therefore, there is a general striving to accept housing that is inclined to supportive a body of knowledge rather than the unfamiliar, often rejected as mundane.

The overall complexity of housing arrangements for individuals, groups, societies, cities and countries originates from the rudimentary housing environment described implicitly as “settings” (Rapoport, 2001). In most cases, within given ‘settings’ planned actions are often not realized, due to several controlling forces that are quantifiable and non-quantifiable (Njoh, 2002). Therefore, the process of housing exists in delivery systems within settings. It is within these settings that the constituents of processes, actors and other elements become interactive in an attempt to achieve wholesomeness and purpose. These complexes of interacting elements form a distinctive system (Bertalanffy, 1950).

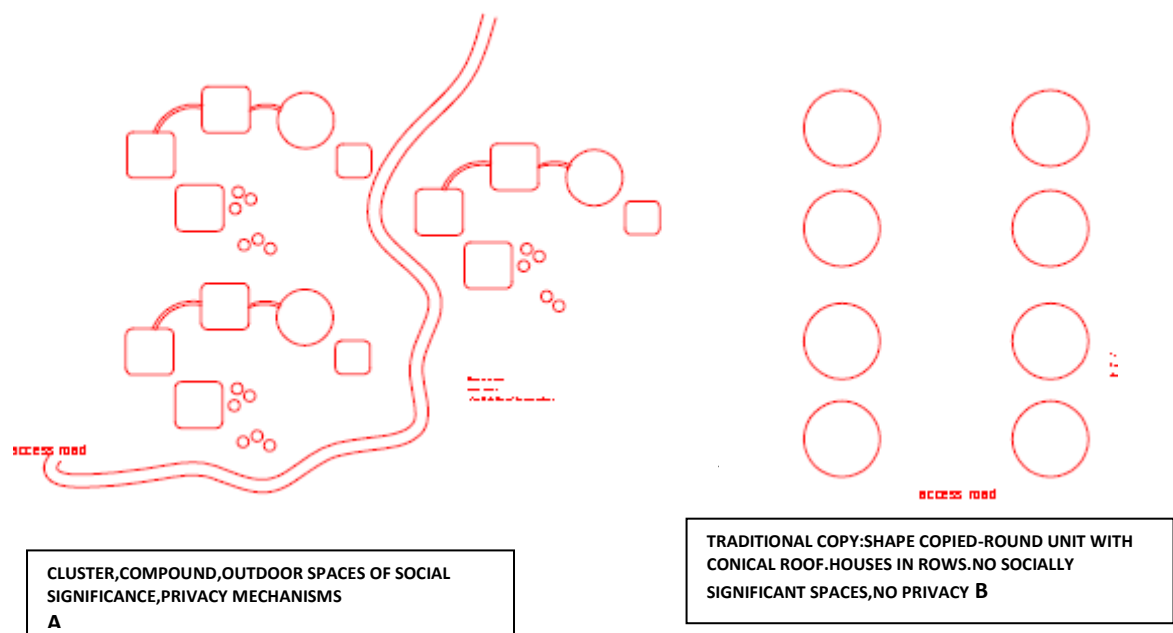
It is evident that these constituents of housing delivery systems namely, the actors, the housing process, the housing product, and the existing housing environments require unbundling from a generalized viewpoint. Rapoport (2001:145) *argues that ‘housing is a particularly striking example of the need for theory. There is too much information, numerous disconnected pieces of empirical research, which in effect, become counter-productive’*; and went on to suggest ‘dismantling’ as technique for understanding underlying theories. Therefore, if environmental quality is one of the attributes of the nature of housing as suggested then, it is a constituent of the housing delivery system (Rapoport, 2001). It is by such deductions that the constituents of housing delivery systems can be unbundled through specific filters, which this research upholds in architectural terms in its discussions. More so, there is the need to delineate these filters to ensure that the systems are measurable in terms of their contributions to the whole (HDS) tangibly.

By this position, that the constituents of the housing delivery systems are interacting together in a form as the built environment and this is largely from where communities take their origins: To the extent that their historical conditions (knowledge base and learning curve) do influence their choices and consequently their lifestyle (Aradeon, 1978). In specific terms, it is evident that the housing actor/partner and the housing product have relatively retained their attributes and nature over the years. However, the variableness of the housing delivery systems became the bane of global housing challenges. Since actors/partners of third world, countries in the housing environment continue to create urban blight, which inadvertently occurs when productivity dwindles in applicable settings of the developed countries.

Most housing theories deemphasize the housing product, since it is the architectural design alone (Bauer, 1974; Scott, 1974; Jepson, 2007; Marcus, 1962). Even where the need to connect users to the product of development is often emphasized (Aradeon, 1983). In this regard, housing represents a conscription of ‘architectures’ compelling limitations of material and

technology from which new experiments in housing originates. It is this reliance on architecture to envision theories through form and function that continues to ensure that lifestyles remain a visual expression of design intentions. Otherwise, architecture is a dominant concept of cultural response to space, form, and lifestyle (Aradeon, 1991, 2007; Rapoport, 1983, Carter, 2010). A key suggestion of design intentions in this regard was posited by Rapoport (1983:249); in his analysis of the Man Environment Relation (MER), where he points out that, “... *design is not a free, capricious, artistic or creativity activity based on whims, guesses or designers’ likes or preferences. It is rather a responsible attempt to help provide settings appropriate for specific groups of people.*”

However, it is important to highlight that such incline as above does not support local phenomenon, which have sustained the housing debate in developing countries, as they are traceable to the evolving cultures of the west (developed countries). Since, the cultures of the developing countries are mundane and inaccurate copies of design and they ignore cultural variables and traditional environments (Rapoport, 1983). Figure 3.1 graphically illustrates Rapoport’s notion of design copying tendencies by indigenes, which is a citations from Aradeon’s work (1976).

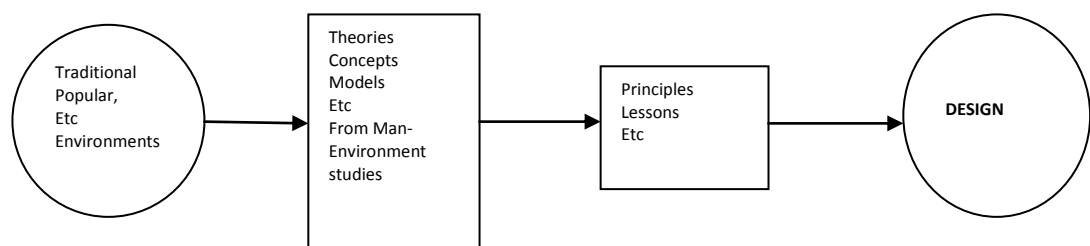


**Figure 3.1** Adopted Traditional/Indigenous Land Use Concept Based on Aradeon(1976,pp.109-112)in Rapoport (1983,pp .249-268)

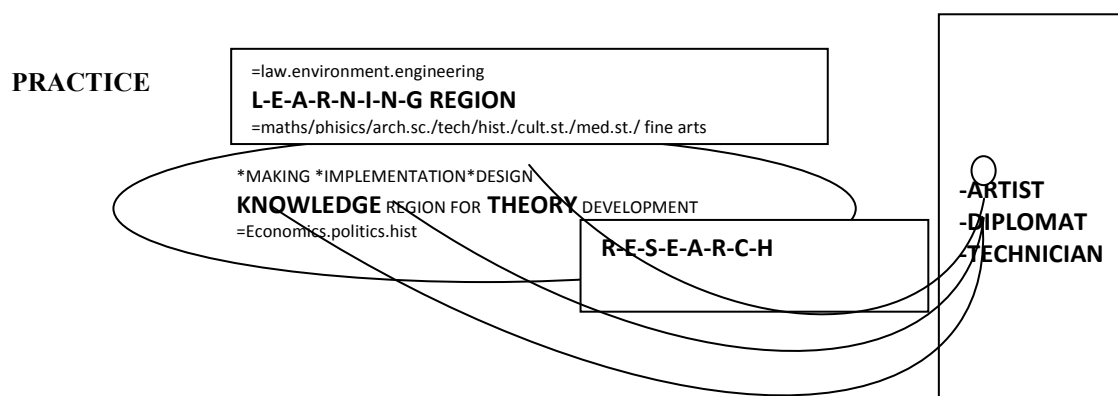


The suggestion is that, such design copying does not work in new circumstances due to the lack of meaning, significance or image as well as a total rejection by users. The knowledge base and learning curve for this extrapolation is essentially western. Rapoport (1983) went on to proffer an MER theory, which is supportive of sustainable design and is meaningful based on tradition, the popular, environments and other less subjective elements of the settings (Figure 3.2). Generalized citations as this for underdeveloped countries serves the purpose of proffering idealized solutions that emanate from biased appreciations of true conditions and inaccurate data (Gyuse, 1984).

Carter (2010) proffers similar understanding of design approach from the design research perspective. The intensity of knowledge base required is invigorated in the adopted theoretical model for architectural research, which culminates in the design itself but based on a creation, making and implementation analysis of knowledge content, learning, and practice of the profession in order to ensure good domestic architecture (Figure 3.3). This unfortunately assumes a global (generalized) learning curve as different from the learning curve of settings thought to influence lifestyle and housing arrangements locally. The interplay of learning curve and knowledge base implies historic conditions as these elements of cultural experience are time related. It is evident from the historical backgrounds of developing countries that design solutions imposed by the developed countries have failed to achieve planned objectives (Njoh, 2002).



**Figure 3.2** Man-Environment Relation Theory. Based on Rapoport(1983,pp.249-268)



**FIGURE 3.3** Architectural Research model which derives from analysis of creation, making and implementation of good architecture: Based on Carter (2010,pp.42-46)

These design solutions were both cultural and economic in nature (Aradeon, 1980; Godwin, 2002; Eleh, 1987; Hunter, 1981). In most cases, the so-called “inaccurate copies” were imposed by the same western theories that totally ignored the transitional nature of local societies in relation to regional economics (Hunter, 1981). Since, they often randomly fund elaborate and massive projects, which are over and above the comprehension and usefulness of the locals (Toussant, 2008; Aradeon, 1983). It is from these settings of realities that locals (stakeholders) became creative as their omnibus spatial concept often facilitates their adaptive capacity within the urban environment (Aradeon, 2007). This omnibus spatial concept is a reflection of the adaptive capacity of stakeholders’ arrangements in relation to settings, which stimulates the diversity seen in the housing delivery systems over time.

Developments in the architecture of HDS are such that theories influence the overall role of design. Rapoport (1983) identified four major theoretical issues. Firstly, that design provides settings for people. Secondly, that MER theory which is central to design attitudes is about the nature of objectives. Thirdly, that generalization is the valid basis for this conceptualization and fourthly that the validity of evidence must encompass historic periods, cultural traditions, and all forms of design through its developmental stages. From the foregoing, it is plausible to identify the constituents of these four theoretical issues as the basis for the development of variables in relation to the MER theory offered.

The influence of MER theory and other related theories on design is not limited to architecture as simultaneous arrangements occur in the same settings in economic terms. The housing values, constraints and sub-markets (Thorns, in Ungerson, Valerie, ed. 1980) drive this same arrangements and settings so described above. The housing values within a particular society are influential in initiating the housing goals for individuals and groups. Thorns (ibid) identified two levels of constraints, which limit the achievements of these goals, which this research considers essential to HDS. The societal level of constraints in relation to economic structure, public policy, building, and activity regulations and the household level of constraints in relation to capacity to buy housing services; income level, capital accumulation as it impacts on the abilities of household to translate housing aspirations into effective demand.

Therefore, the housing value in relation to historic conditions, lifestyle and regional/local economics play a vital role in the housing delivery systems and hence the formulation of a theory in this regard. These developments are visible in global terms in relation to emerging design theories.

Theoretically, housing as a ‘verb’ or a ‘noun’ was figurative in Turner and Fichter (1972). These words delineated newness in the understanding of an emerging global trend, in describing the process or activity of housing as the verb. While housing as a noun described the commodity or product. In Turner and Fichter’s analysis (*ibid*), it suggested housing as a verbal entity (as a means to human ends, i.e. as an ‘activity’ rather than as a ‘manufactured’ and packaged product); then there is a likelihood of achieving the objectives of housing. In reality, HDS is more complex than the simplified activity and product based delineation.

By extrapolating the above, housing delivery systems depends on a service of more-or-less-organized and institutionalized services, the number and complexity varies with the nature of the arrangements and settings. Although the housing ‘product’ and ‘process’ remains universal elements in the global housing debate. Unfortunately, this does not imply a common responsive culture by users as well as design intentions; except that, this trend is emanates from a capitalist democracy viewpoint. However, to unbundle the elements of “product” and “activity” in HDS against a backdrop of “arrangements” and “setting” this research considered the systems attribute of HDS theories (Prins, 1994).

In addition, there is the argument that systems approach to global housing remains a structured step-by step attempt to create a global dialect for tackling housing delivery, which takes its origins from the diversity in the housing markets; with special emphasis on the welfare regime approach (Brandsen, 2001). This notion attempts to capitalize on the concept of flexibility and adaptability of systems with a more recent but subtle sustainability implications. The flexibility of the housing markets depends on the openness of the system at all levels of production in order that the number and variety of producers are compatible, while their interchangeable products maximized (in both material, economic, and human terms). The material terms may be feasible, but interchanging human function and needs in relation to housing is rather complex; hence the demise of the housing design notion and the housing product as an end in itself to the housing delivery system. Since often times, design intentions vary from the realities of spatial use (Aradeon, 1981).

Therefore, emerging global trends tend to favor a more open system for economic reasons and the need for the unification of product and process. This unification is the driving force in capitalist democracies as this will maximize wealth accumulation and improve production and its factors within a more controllable setting. The new urban form which these attempts have created have ensured that economies are globally connected alongside typologies in housing

yet locally disconnected in context due to regional economic weaknesses (Castells, 1996, 1997, 1998).

It is such economic structure that allows theoretical frameworks to develop in favour of a regime approach, which often times is pluralist in nature (Sanyal, 2001). The insistence by the state that non-profit method of price calculation for housing is to be enforced within strict income criteria for its distribution within the same market economy as those of for-profit housing producers simply reflects the dualist model which has been the basic approach of most countries like Nigeria.

Therefore, governments continue to design, build, and collaborate with the private sector for target housing provision (Tipple, 1994); within a market economy system that is already deficit in its housing stock, where demand far exceeds supply yet they continue to subsidize the supply chain of delivery systems. Meanwhile, the necessity for demand is not always in relation to needs rather in relation to accumulation of surplus value derived from the housing markets by stakeholders. This source of surplus value accumulation of those strong enough to negotiate their arrangements in settings becomes a problem. Since the institutions and organizations that brings about the supply of housing are unable to stave off such consequences of social imbalance. One of such applied HDS theories with a broader implication is the convergence theory; it states that housing systems will inevitably converge to a single type in terms of product, activity, and ultimately systems. This notion remains elusive and not practical (Brandsen, 2001; Kemeny, 1981, 1998).

Brandsen(2001:10), in an analysis of economic systems and institutions in housing turns to Max Weber's sociological discussion of economic phenomena (Weber,1968;1995). That economic systems, "including 'the' market does not exist; there are only actors and institutions. *'For instance, modern Western capitalism could never have existed without rational accounting methods, currency, and a legal system of property rights; stressing the context specific nature of economic action in markets and dispelling universalism, and a predetermined institutional context. This approach prevents the strict separation between public and private actors...'*"

This research utilizes the analysis of Brandsen (ibid), which delineates actors and institutions as the realities of markets rather than the abstract market (alone) to throw fresh insight into today's public-private partnerships. By so, posits an emerging convergence of systems in which *actors* and *institutions* are the key to understanding this new paradigm in housing

delivery. This notion adopts the General Systems Theory (GST), posited by Ludwig von Bertalanffy (1901-1972) which is an offshoot of Tektology theory (by Aleksandr Bogdanov otherwise known as A.A Malinovsky, 1873-1928).

Rapoport (2001) and Brandsen (2001) analytical approach to the subjects of design-environment and market-economy (in terms of the context specific nature of actions within a system), are in agreement with the GST approach. It stated that; “...*a system is a conglomerate of related parts such that the ensemble is not only a conglomerate, but it is something more than the conglomerate; hence reality as a whole can be considered as a big system made up of subsystems*” (Bello, 1985:142).

Comprehensively, it is evident that there exist in HDS a “setting”, and “activity settings”. It is the arrangements of stakeholders within the environment settings and the activity settings, which give credence to the theories that emanate in design, economics, or society. To aggregate these theories and optimize an HDS for use, the interacting components of HDS must be unbundled. In order to achieve this unbundling, an HDS review in terms of its systems attribute is important since various systems co-exist within underlying subsystems. Therefore, in any giving setting of human co-existence there are systems, which act as drivers and instruments of that system. It is within that ambit of collective governance that all systems attempts to subsist in today’s rational world of co-existence and democratic economies. It is against this backdrop, that delineation of public and private systems becomes vital. Since PPP bears the constituents of settings, systems and arrangements vital for housing delivery. To unbundle the systems’ effect on housing, this research utilized the contributions of systems knowledge base to understand if there are any underlying correlation between elements of PPP, HDS, and AHD, which benefits and improves the entire context of housing delivery. This application of systems and subsystems is in relation to all parts of the elements of HDS and this affects areas of design, economics, society, and the overall hierarchy of parts to the whole.

In the same manner, the hierarchy of systems is evident from the prominence of globalization that makes nationalism a subset; hence, nationalism is a subsystem of global systems. These impositions/subjections are either collective in will or a result of a natural occurring phenomenon. It is in the same way the housing delivery systems exist because it does so within the complexity of influencing subsystem yet itself is a subset of other higher and lower influences. The General Systems Theory (Bello, 1985) supports this analytical translation from one field of study to another theoretically. This implies that there are no absolute systems and systems theory itself does not explain in full the relativity between elements of any system. It

only gives credence to elements dependence and interdependence and the manner in which by selection they can become prominent or latent within any given context. Even where most housing in developing countries of such hierarchical selection is termed “selectionism” described as *“an evolutionary process whereby environments gradually become congruent with activity systems, lifestyles, meanings, etc”* (Rapoport, 2001:148). A description as this for developing countries further makes ambiguous the realities of an omnibus spatial concept of housing settings as earlier described from which theories could emanate. Since such theory discriminates non-assertive western theoretical viewpoint of HDS, yet the supported assertive viewpoint has historically failed to solve the housing problems of these developing countries. This research highlights and explains the indicators, factors, and determinants of housing delivery systems as understood in the open literature and in relation to the realities of local omnibus spatial concepts. It is therefore operational to capture the influences on housing delivery systems such as economic systems, political systems, social systems, regional systems, cultural systems, monetary systems, technological systems, industrial systems, and ecosystems (to mention a few) as sub-systems. Although, they are systems in their own right and do exist as subsystems within larger conceptual systems of global relevance. To this extent, architectural systems would feature as a system of its self and a subsystem of the built environment since it is at the core of this work for understanding the relation between HDS, PPP, and AHD. Evidences to this supportive theory abound in the realities of existing omnibus spatial concepts of housing and design intentions (Aradeon, 1981).

In the development of a theory to capture the architectural viewpoint to understanding HDS, PPP, and AHD three constituents emerged as prominent. They are the arrangements (among stakeholders and) between environment settings, activity settings, and systems. These constituents when applied in local terms, of realities of design intention in relation to existing omnibus spatial concepts of housing, it captures the complexity associated with infusing design standards as a subset of architectural theories into housing solutions for developed countries. By so, differences in learning curves (historical conditions) in the architectural profession would simply increase the occurrence of differential architectural expression locally, which would encumber other related arrangements in any given housing settings.

This direction in research is prominent in various movements that have captured the complexity of human endeavour and behaviour. It is in this methodological approach that definite form for delineating these activities became the paradigm shift from philosophy alone into related systems of the human behaviours in empirical abstraction as posited by Bertalanffy (in Bello,1985). Philosophy alone represented an action, while reality by systems theory

explained the product of human action and nature. In this regard, the goal of general systems theory (GST) is clearly circumscribed. By so aims at wholeness of entire systems in which many variables interact and in which their organization produces strong interactions. It does not deal with isolated processes with relations between two or few variables or with linear casual relations (Labedz, 1962 in Bello,1985).

In this research, the stakeholders, environment-settings, and activity settings formed the basis for the determining variables; by so, the systems approach is useful since all the variables set out are in communication and in hierarchical interaction. In this regard, feedback and regulation (or controls called the cybernetic concept) inherently informs the applicability of systems theory herein as open or closed depending on the variables in communication (Bello, 1985). In application to housing, design is a subsystem of HDS yet it is an element for feedback and regulation. Most third world design solutions for housing are open systems based on the economic and knowledge dependence on imported materials and technology respectively. Where design concept is supportive then, the supportive theory inundates the local systems with externalization, such that it can only deliver design choice by “selectionism” as earlier cited.

Therefore, it is evident from the above argument that the thrust of the housing process and quality of the housing product as subsystems are measureable through certain known variables in the housing delivery system. Their outcomes are predicated on the actors/partners and the institutions within the context of housing environments/settings. It is from this conceptual thinking that this research builds upon to unbundle the arrangements among stakeholders within housing delivery systems.

### **3.1.2 Perspectives to the global Housing Problem**

It has been established that changing perception of the housing problem may be attributed to changing historical conditions of societies in the built environment for which the housing is intended (Ying,1997).This is traceable to the fact that globally, housing used to be a household responsibility until the advent of industrialization. Through self-help, individuals and communal groups achieved housing delivery (Dmochowski, 1988; Hunter, 1981). Therefore, housing was at a point in global circles an individual problem. However, through industrialization housing became a city (of public and private) problem for the emerging urban society and consequently a socio-economic problem (Barney, 2004). The need to redistribute national income between investment and consumption within the context of scarce resources became an issue (Pugh, 1980). It is the consequent urbanization and the economic implication,

which has driven housing into becoming a major urban problem; even though, it was once thought of as a public concern requiring public-private participation at the city level (Sengupta, 2006; Smith, 1998; Sivan et.al, 2001). As socio-economic influence of housing on society persisted, housing gradually evolved into a global issue of human rights dimension (Leckie, 1989). Although, it is unclear how this 'right' fits into the general socio-economic development process and how it can be translated into tangible and acceptable socio-cultural standards as experienced diversely. Leckie (ibid), suggested six criteria for adequacy namely, physical structure, site, infrastructure, facilities supplied, costs, location, and legal security of tenure with a plural emphasis on the need for details and specificity.

The human right problem of housing has inadvertently made the housing debate go a full cycle from individual to social and then back to the individual. Therefore, in the critical mass of all analysis, housing remains an individual problem within settings (whether rich or poor, as well as the state of being, which is low-income, middle-income, or urban poor or rural poor). Since need and effective demand must exist for housing process to be initiated and the housing product to emanate.

Most democratic countries of the world (including Nigeria) have adapted this human right declaration of an individual's right to housing constitutionally. This is against the inability to interpret the relevant applicability to local context: In terms of a single family or an individual or a commune. In effect, developing countries have attempted (like the rest of the developed world) to provide housing, create enabling environments and more recently partner with the private sector and society to achieve housing delivery in no clear terms of reference theoretically. The clear terms of reference need not be general but more specific in the definition of stakeholders' activity and the resultant outcomes that should be more predictive in nature. Among stakeholders are professional experts whose notions continue to undermine realities. Hamdi(1995:3) documented this phenomenon in an unprecedented way as follow;

*“if we ask what kind of professionals and professional intentions are demanded to meet this problem or what methods,tools,skills,knowledge,attitudes, and theories of practice might help,the answers,from even the most eminent 'housing expert',will be much less confident and much more moddled.The answers will vary according to how the problems are perceived,which in turn will vary according to who provides the definition”.*



It is of essence to note that, the diversity of perception is evident in the changing social, economic, political and cultural factors historically that created the paradigm shift in the perception and the consequent solutions that have emerged until date globally.

According to a study published by Miles and Parks (1984) it was estimated that 53,000(fifty-three thousand) new houses are needed each day globally to keep pace with demand. Similarly, Wheaton (1983) estimated that providing a 30square-meter of finished house for every poor family globally would consume 25-30 percent of the gross national product (GNP) in most countries. More so, over a billion people globally lack adequate shelter (UNCHS, 2000).

However, from the above the factors influencing housing decisions both as a product and as a process usually have their definitive “thrust” upon which the effective action is predicated. They may be politically motivated or socially motivated or for-profit motivated. The moderate parlance for today’s housing is the public-private partnership.

Commercially driven housing has its variable thrust, the same applies to social welfare driven housing and more recently the need for partnership between public and private sector. Therefore, most housing solutions are often derivatives of pre-conceived optimization of resources by professional experts as indicated by Hamdi (1995). These housing solutions all have variables upon which the thrust of housing is predicated, in order to achieve the objectives setout directly or indirectly. The professional experts’ tilt becomes consequential to the outcome of the preferred housing thrust since that is invariable his or her bias for the housing solution rather than a broad theoretical objective viewpoint (Brandsen,2001).Most deductions are often from theories which lack empirical evidence (Priemus,1981).

However, most theoretical exploratory and empirical studies since the 1970’s (after the World Bank and the United Nations interventions initiated globalized framework for member countries) shows they originate from economics and sociology (Aradeon,1978; Pugh, 1991; Cohen,2004), this accounts for the paucity of architectural theories in housing (Rappopprt, 2001).

Today, it is more clearly understood that housing is not the most complex technical good produced in an industrial society perhaps the most complex economic good to analyze and properly manage for the following characteristics reasons (Angel,2000);

- Housing durability, this measured in decades and the need for its sustenance of quality.

- Housing heterogeneity, measured in terms of design, age, utilities, and diversity of acceptance.
- Housings' spatial specificity, this is a function of neighbourhood, ecological, sociological, and infrastructural qualities.
- Housings' extensive regulatory framework, this is achieved by governments' policy and society in terms of organizational structure of values and acceptance.

The recent inclusion of urban studies and their socio-economic environments has improved the perception of the housing problem in a more inclusive approach in research studies. It is from this standpoint that Turner (1976), and Habraken (1978) set the pace for newer and better formative theories that would tackle the housing problem; their ideas expanded the housing debate beyond ideology and technique and placed design and designing and the role of architects firmly and squarely in a social and political arena. This brought to bear a comprehensive definition of the support paradigm succinct to partnerships and three tenets of for design namely, flexibility, participation and enablement. It was this compelling empirical evidence that suggested a dynamic and incremental activity for housing and its settings. By this, it became clearer that housing problem is generally perceived against the back drop of certain standards and expectations in diverse ways which includes the following; quality, quantity, affordability, building standards, tenure, accessibility to housing and frameworks for institutional participation as well as organizational participation.

However, contextually five general policy objectives have been identified and accepted globally as critical to the perception of the housing problem alongside its variability in terms of thrust, they are; availability, affordability, accessibility, viability and adequacy (Ying.1997).

The availability of housing in relation to the quantity of housing stock benchmarked against the housing need/demand and the supply. This is a jostling between population and available housing for distribution. The same applies to the adequacy of available housing (Quality attribute) in relation to the physical characteristics of the housing environment. (This research is broader in viewpoint than this singular objective of adequacy expressed herein). On housing affordability, households' ability to convert housing aspirations into effective demand is the focus. In the aspects of households' financial ability to cater for that need borne out of effective demand this entails the unit house cost hedged against disposable income/wage as well as family life-cycle and tenure. Accessibility entails the housing distribution principle for social equity and economic sense. Who gets what housing and why? The standards vary from employment type, income groups, age group, social status even political will. The fifth general

policy objective is viability. This is the financial life cycle of the housing project, cost recovery and the economic viability. From the foregoing, the major intent of these policy objectives is to ensure that households are able to access quality housing within quality housing environments.

In Nigeria, the perspective centers on a lack of comprehensiveness (Gyuse, 1984). Onibokun (1990) identified eight flaws in the past strategies for tackling the housing problem namely:

- The problem of governments attempt to directly construct and supply housing,
- lopsided lending practices in favour of the upper class,
- inadequate infrastructure,
- ineffective programme implementation by government,
- narrow conception of housing needs,
- inadequate data base,
- the error of utilizing planning as a game of numbers to impress the public and
- playing the political chess game with housing and its advantage for looting public treasury.

It seems as if the perception in this context is simply to utilize globally prescribed framework to perpetrate local corruption and further subjugate the rights and privileges of the vulnerable. Although this is not an inference, it is suggestive of the local perception in many ways as would be discussed later under the dimension of the housing problems in Nigeria. The baseline theories for omnibus actions by stakeholders emanate from global perspectives, but as Onibokun (1990) identified, the flaws are in the strategies for policies and implementation. In reality, this research observes that most localized strategies lack specific theories and they are based on the whims of political leaders (Guggler, 1982; Aradeon, 1978).

### **3.2 Theoretical Framework for the Study**

The theoretical approach for this study draws from within the architectural sub-discipline of housing studies and architecture. Design, settings, value, and the arrangements among stakeholders identified as fundamental to the debate formed the basis for this exploratory research. Central to these housing issues are five key theories identified to broadly address the research questions namely; the Marxist approach, the neo-liberal approach, the urban capitalist approach, the man-environment relation theory and the underlying general systems theory upon which the relationship model of all inputs shall be based (Prins, 1994; Ogu, 2001; Barney, 2006; Rapoport, 1983; Bello, 1985).

The theoretical framework focused on the 'settings' for housing and the 'arrangements' among actors and their relationship with intrinsic value in the housing market which constitutes a

measure of demand and supply but with particular reference in this research to resource and process optimization. Settings and arrangements among actors are the basis of partnerships, as suggested by Rapoport (1983). An economic parallel drawn from the Weberian analogy, which posits that the existence of markets in itself is a convergence of actions like partnerships, it can only exist within context-specific settings. The use of settings in this case is analogous to the Weberian citation of the “nature of economic action in markets” (Brandsen, 2001). It is this complex relationship between architecture and the other disciplines (Carter, 2010), that this study would attempt to navigate in order to emerge with a synthesis that would define the basis for the deeper import of settings to the design process and the impact on partners’ arrangements and the housing delivery system.

### **3.2.1 The Marxist Approach**

The Marxist approach as it affects class conflicts, and the social systems in relation to partnership arrangements. This is premised on the fact that, housing is a commodity and a source of surplus value for certain forms of capital, its nature makes it a necessary consumption for worker’s, and the effect of social relations of capital on housing becomes a thing of note. For the private investor whose capital creates productivity and his motivation is profit driven in the existing market economy, there is a contrast with the public sector theoretically, whose capital creates productivity yet not profit driven. However, in contrast the value of housing to the public sector is economically different from that of the private sector. Their goals implicitly are different; such relationship is rather complex especially where precedence has been set that the private sector simply pouches on the housing programs of the public sector so as to survive in the market economy. Simply put, the public sector initiates the market systems through institutions for the private sector to pursue the opportunities through existing and perceived loopholes. To limit this process flaw, it is important to analyze the relationship issues for possible correlations (Prins, 1994). This does not imply the absence of a situation whereby in creating an enabling environment, the private sector would now entrench itself in accumulation of private surplus value to the detriment of establishing an equitable society. Baradat (1997) established this departure on moral grounds by the Marxist approach from Ricardo’s labour theory of value, which indicates the morality content of value and eliminates the notion of price implicit to value. While Marxist theory homogenized labour such that, equilibrium of price implicit to value would converge into equitable redistribution of surplus value based on an assumed state of healthy competitiveness.

Therefore, infusing a sense of morality between the public and private sectors initiatives for housing becomes imperative. Since, the provision of any ‘capital’ initiates the process of

partnership between government and the private sector as stated in the national housing policy framework for PPP (FMHUD, 2008). Unfortunately, there are no empirically agreed basis for the measurement of morality associated with the interaction between capital, private, and public sector service delivery intentions and the accumulation of surplus value. By this variableness, the Marxist theory lays the foundation for healthy competitiveness that this research explored in the housing debate to consolidate the nature of the housing process and product in relation to the efficiency of PPP.

Since PPP is a structured arrangement between the public and private sector of an economy, it is essential to note that such union can only exist within acceptable legislations and political acceptability's/sensibilities of stakeholders. Baradat, (1997), described the nation-state as the politicized union or unity of a people. A merger of this reality with the provision of any capital from a particular private interest group practically changes the 'settings' for housing delivery systems to operate. Implicitly, it becomes more complex than the simplistic production and distribution of housing as a product as suggested by most viewpoints in this study. There is evidence of class conflict between those in government (public sector) and those outside of government (private sector). As is often the case, this becomes a tool for politics and swaying or appeasing the people (Olutuah, 2007).

Therefore, while Nigeria is yet to grasp the definition of its existence as a nation-state, the divide along cultural, ethnic, and religious lines as a common class distinction feature is prominent in its established socio-cultural strata. To objectively plan for housing for all by the year 2000, 2010, or by 2020 is questionable. The social structure requires context specific delineation to ensure proper service delivery in the public sector. A whimsical inclusion of the private sector would obviously be plagued with the same problems of division and national framework flaws that the public sector is unable to solve.

Even the city of Lagos in its diversity suffers from such social imbalances in housing as seen in the government housing which predominantly benefits government employees; while the private sector housing, are either cultural, religious or economic in the nature of neighbourhood concentration of its' household groupings. Therefore, the seemingly nucleated city is actually a configuration of several social focus groups living together along perceived delineation, which they have evolved among themselves for purpose of convenience (Aradeon, 1980, 1991, 2007, 2009; Lawal, 2006; Mabogunje, 2002). To this end the housing in Lagos are structured along sentiments which favour socio-cultural divides rather than strict economic lines of delineation. The middle-income group represents the formal private and public sectors

of the economy where class is in terms of viewpoint and not just income alone. It is this shared perception, which makes for approaches such as the omnibus spatial concepts a proliferated practice in the cities' realities of design intentions.

The housing shortage only increases the likely arrangements along these patterns rather than a direct mixture by need/demand alone. Aradeon(1988) insist that housing continues to be provided among actors/partners of social focus groups whose ability to influence institutions(formal/informal)grants them exclusive access to housing and in most cases multiple home ownership (Daramola,2007). This in turn confirms the Marxist notion of accumulation of surplus value to a few. To this end, the nationalism as epitomized by the national plans and planned housing programs will continue to fail. Similarly, the strict economic substructure extrapolated as the motivation of society by Marxism falls short of interpreting the foregoing analysis of the Nigerian and Lagos context of social relations. Evidently, outside influences, which are stronger than the motivation of economics alone, seem to create the settings for housing delivery systems. The social culture and subculture only exists along certain lines, first ethnic, then religious, before economic (Aradeon, 1978, 1980; Amuwo, 2009; Rapoport, 1983;Adebayo,2002;Abiodun,1974,1980). These first two are clearly absent in Marxist consideration before it attempts to justify class struggle and social imbalance from economic standpoint. This departure gives credence to subsequent analysis in this study.

In the delineation of the effect of class struggle among actors/partners, there is an observed approach, which has instilled target solutions as the objective for housing delivery systems. This defines theoretically the social 'focus groups 'as the object for target housing delivery (Aradeon, 2007). The ability of society to form and rally around such groups or the connectedness to such groups simply grants them access to any housing within established housing delivery systems (Aradeon, 1991; Castells, 1996; Jiboye, 1997; Islam, 1996). This approach often becomes the yardstick for government success and the private sector in isolation of the larger population (LSMH, 2007). In this regard, the pattern for adequate housing evolves to accommodate such notions, which are non-material standards (Mabogunje, 1978). The consequence of these non-material standards is the modification of theoretical objectives that are in synchrony with the perceived lifestyle, value systems, as well as the settings expressed as omnibus spatial concepts in housing. An understanding of this influence on housing delivery systems would improve the techniques used to achieve housing delivery and subsequently adequacy. Since target delivery of house-type and cost remains an important criterion to the partnership policy framework currently in practice (FMHUD, 2007).

The stratification of society by the Marxist approach to justify value enables this research to precipitate its class distinction approach. Instead of attempting to categorize the social focus groups based on ethnicity, religion, employment, income, etc, this research drew its social stratification of PPP from the nature of initiation of the housing delivery system where partnership is (or not) a causal factor. The variability here is public or private or a coalition of both or other emerging forms which is yet unknown in the open literature.

### **3.2.2 The Neo-liberal Approach**

The Neo liberal approaches of the World Bank and its transition from the provider paradigm to the enablement paradigm has often formed the basis for public sector policy formulation of most nation states in line with global trends (Pugh, 1991). However, the basic consideration of the 'nation state' to set the pace for enablement strategies excludes the arrangements of communities as established previously in this work. Since the assumption is that, the national government of the nation-state should establish the policy framework for housing and expect the state and local governments to participate equitably. This framework is based on the premise that the local governments would form the cradle for establishment of coalitions among organizations but unfortunately derailed by class conflicts; and the effect of the social focus groups on policy formulation and interpretation/implementation cannot be ignored. Class conflicts often emanates from political divides orchestrated by ethnic, religious and economic rationalization of social issues (World Bank, 1993; Pugh, 1994; Sanyal, Mikhija, 2001; Zunino, 2006).

More so, the inability of social focus groups to form expected coalitions due to poor social capital (Angel, 2000; Putnam, 1993), has become a subject of debate, since the basis for any coalition is subject to the skills of the groups in context towards managing the peculiarity of the problem they may face (Aradeon, 1983; Schwerdtfeger, 1982). Usually it is easier to manage issues that are native or generic to known knowledge among any people. Unfortunately, the effective social capital discussed by these proponents of this approach is in line with established neo-liberal theories as postulated by the World Bank and the rest. The elimination of the ideological fact that these people and groups have underlying experiences(learning curves/historic conditions) on how to establish and coordinate their affairs on other issues is often disregarded since they do not seem to be able to translate accurately western ideologies for their lifestyle (Smith,1998).

Therefore, there is need to establish the premise of neo-liberal theories as they negatively influence the pluralist context for housing in Lagos (Sanyal, Mikhija, 2000; Keivani, Werna,

2001). Since the housing context is syncretism and multi-layered and multi-dimensional; with varying needs and objectives due to several local, state, and national reasons alongside other considerations in the housing debate as it affects the rest of the world (Rapoport, 1983) in the productivity balance sheet of housing products essentially. In most cases today, housing is a packaged deal of a system of design, material and technology sold to developing countries. Apart from infrastructure in most cases referred to as site and services which local economies caters for through imported technology the superstructure is sold as a whole which is no different from the erroneous milieu of pre-colonial and colonial era.

Such complexity has inevitably translated into proliferation of agencies and replication of function in a bid for various socio-economic groups to benefit from a national framework, which is centrally funded (NHF2007).

The formation of groups by individuals is often never the first line of action especially where this group intent is to initiate changes in policy. These groups are often perceived as confrontational rather than in dialogue. Therefore, even if the social capital issue is sorted and representation becomes that of knowledgeable groups it does not imply that the individual needs/concern of housing would be satisfied. As this is often a function of lifestyle and could be seen for instance in the need to replicate social relevance among locals through multiple home ownership (by individuals) in a three-tier government; federal, state and local government (Daramola, 2007, Egbu, Olomolaiye, 2008). This phenomenon is common among the middle to upper-income groups. Often times a single individual owns an average of three houses unoccupied in relation to the perceived social linkages with the three-tier of government. A house in the federal capital territory Abuja, another at the state capital of the part of the country and another house in the village from where the parents take their roots and where political or socio-cultural recognition is strongest. A house in Lagos serves a tripartite purpose, accumulation of surplus value, regional network, and primary residence in most cases to access commerce and lifestyle (which is essentially liberal and convenient). The funding for all three multiple home-ownership and the Lagos house is often within households declared and undeclared incomes relative to individual coalitions and arrangements with institutions to derive these benefits of value.

The notion that the process of housing and management of stakeholders' actions can be curtailed within a three tier institutional system of governance by selecting a few social focus groups whose yearnings and aspirations/agitations are to be satisfied for effective production and distribution of housing is therefore inaccurate.



Neo-liberal approach invariably posits a practical selective approach (selectionism as earlier described; Rapoport, 2001) to the process and product of housing with an implicit prioritization of beneficiaries whose locus may be far remote from the context of the limited housing provided due to a lack of capacity (Pugh, 1991; 1994).

The import is that jurisdiction as a key component for the success of the neo-liberal approach in housing delivery is also the fundamental weakness in territories like Nigeria and consequently that of Lagos whose locus is not just a city but a regional center for development and an 'identity symbol' among stakeholders and institutions. Therefore, the partnerships that are likely to emanate from such conundrum may not rightly exhibit the properties of policy frameworks as set forth, as there are principal formative and normative process that often underlies the perceived objectives of actors who largely remain unregulated or unmonitored.

The import of the neo-liberal approach enables this research process to contextualize the premise for stakeholders' delineation and inclusion relevant to the state based housing policy frameworks. In Nigeria, until the 1990's, the private sector has been largely excluded from formal housing policy framework as they are often not a factor hence their actions seems to negate the thrust of most policies in the past.

### **3.2.3 The Urban Capitalist Approach**

The Urban capitalist approach in an emerging market economy as Nigeria and the need for capitalist systems to reproduce its means of production, labour and relations of production in order to survive is a given in every housing study for the urban context. In an urban setting, there is the implication of private production and its limitations in the equitable distribution and consumption of goods and services. To achieve equity, there is need for interventions by the state to manage capital and social crisis in an urbanized capitalist system for housing to thrive equitably and profitably (Pugh, 1980, 1994; Tipple, 1994; Van, Willem, 2007; Williams, 1983). Since surplus value derived from housing could aggravate social imbalance by way of urban gentrification (Duanfang, 2007; Castell, 1996; Desoto, 2000). To this end, capital migrates to cities positioned by liberal policies through deregulation of the economy to attract investment and competitiveness. Hence, the ability of an urban center to produce becomes the main driving force for its existence. It is only by this method that cities can generate capital and surplus value accumulation. Housing in this regard, is a key driver of production, which in turn is a factor that stimulates HDS. The specialization of urban spaces (in the financial, real estate and insurance sectors) and touristization (transformation of neighbourhoods into centers

of attraction for capital/surplus value accumulation) are two consequences of the urban capitalist approach to HDS.

Nigeria is theoretically as capitalist democracy and upon this basis, most policy documents derived their origins (Awotono, 1987; Barney, 2006). However, it is obvious that such strict compliance in application does not exist in any social setting from which housing derives its own settings (Rapoport, 2001; Bertrand, 1990). The attempt to eliminate natural prowess of urban centers in favour of external capitalist controls and interests is often met with local resistance (Smith, 1998). More so, urban capitalism recognizes cities through filters which are Anglo-American and ethnocentric in perception; and this originates from Anglo-Saxon dominated ideologies of capitalist democracies (Robinson, 2002).

The reality of urban capitalist approach is evident in the cumbersomeness with which private capital (sometimes in conjunction with ill-advised public capital) creates the specialization of urban spaces in third world economies. The emergent nucleated urban spaces of affluence alongside abject poverty accentuate the failure of capitalism in such urbanized settings. The approach only works for a few stakeholders with linkages to the networks of local and foreign capital. The hierarchy of the urban space reveals the disconnection (in the environment settings) between capital and HDS.

In describing third world economics, Baradat (1997) posited that there is often a contradiction between socialism and nationalism and attributed such contrariety to communal cultures, which again epitomizes the existing lifestyle often neglected by analyst. Hence, in such emerging states, socialism is an extension of tribal-communal-ethnic relations in practice, rather than a commitment to traditional socialist goals and not even strict capitalist goals cannot escape similar interpretations. This underlying sentiment of third world cities like Lagos is such that the strict approach thought to influence HDS does not reflect realities. While the urban capitalist approach helps to understand the stratification of the city in economic terms, it also reveals the underlying movement of capital within the city, which is relevant to private participation.

In the application of the urban capitalist approach to initiate private participation in Lagos, factors such as ethnicity, religion, social and economic structure of society are relevant to the utilization of capital for productivity. Since the use of capital and accumulation of surplus value derived from productivity are not the preserve of a homogenous few/group.

In Lagos, the intrinsic worth of housing is in relation to sub-regional productivity and specialization of the urban space. This is evident in the intense productivity of central Lagos (or Isale-Eko, which is rather subsistence) and the localized specialization of its urban space. This is lower in hierarchy of urban space value when compared to the intrinsic value of housing of the westernized settings of Ikoyi and Victoria Island where private capital specializes' in re-inventing the urban space historically. The mid-rise blocks of flats in central Lagos and the high rise residential complexes typifies the variation to the nature of urban capital investment in the same city controlled by productivity and the intent to specialize urban space for high yield value (A cross-section of rental value was discussed earlier in chapter two).

An attempt is sort by this study to extricate PPP's applicability from such extreme consequences of private capital through the understanding of the influence of urban capitalist approaches on HDS. Since, income related productivity of households and actors/partners is never a guarantee for access to adequate housing. In reality, the income related implication never really becomes the formal consideration for the arrangements among stakeholders in an attempt to achieve housing objectives. The reasons are not within the context of this study but studies show that, a sense of community, security, and trade/income is partly responsible for the basis of such preferred living coalitions and the acquisition of housing (Abiodun, 1974; Aradeon, 1980, 2009; Okpala, 1981).

Urban capitalist approach in terms of 'accumulation of surplus value' is essential to the understanding of housing delivery systems in Lagos. Desperation towards ownership by households has created various ingenious delivery systems, which is outside the scope of this research.

However, it is important to note that such desperation simply gives credence to poor quality housing and effectively inadequate housing, based on certain terms of reference especially those of human right issues.

Therefore, the need for specificity, localization, individualization among actors as observed in current housing debate can be further understood from the point of the contextual economies and hence the capitalist approach in relation to accumulation of surplus value for which the 'urban' provides the settings.

### 3.2.4 The Man-Environment Relation Theory

The Man-Environment Relation (MER) theory is applicable in the development of design objectives in association with the criteria for choice, the ‘what’ and ‘why’ of design (Rapoport, 1983). Achieving the stated design objectives and validating the objectives as well are critical to design evaluation, which is a subset of HDS and implicitly PPP. To design housing and settings this theory elucidates the process problems of housing which culminates in the product results.

The perceptions of housing objectives of various groups are plural in nature. To the end that, housing environments are usually outcomes of entrenched and perceived lifestyle in this case cultural syncretism (or creative synthesis: Rapoport, 1983; Aradeon, 1991). This implies the application of design specific methodologies as it affects the entire historic epochs of the groups and their culture specific requirements.

This research has attempted to achieve this in its analysis of policy epochs to an extent; from which patterns of housing and lifestyles are emerging. Rapoport(1983) insist on the analysis of the traditional, popular and other environments to provide adequate information essential for design. This is expected to assist in removing the effect of copying by default from all sources other than the local context-specific settings for the housing been proposed. For example, the enablement paradigm in housing suggests that the governments should remove/reduce constraints and maximize resources (Angel, 2000). The identified constraints are usually legislation in relation to the available resources, while the resources are; available capital, land/tenure, human and material resources (Prin,1994). This generalization is in total exclusion of the settings and the information derived from the traditional and the popular (Rapoport, 1983).

The recipe for enablement strategy in Nigeria suggests as follows; target price for housing, which is derived from economic/financial index and indicative of price mechanism; and the single-family house form/household as the target housing typology for provision (Mabogunje, 2007; Aradeon, 1991).

The associated material and technology implication are often secondary. (Even when this can adversely affect the balance of trade of contextual economy (Hunter, 1981).This promotes overly rapid and destructive culture changes in total neglect of the environmental settings in terms of quality/lifestyle, which emanates from such objectives. It is argued that such quality is rather not intuitively clear and may be counter intuitive (Rapoport,1983).The implication of the

environment been supportive in this regard also applies contextually to the supportive role of government in the housing delivery system.

Three useful questions asked by Rapoport(1983:256) highlights the notion of enablement:

1. What is being supported? (*social structures, activity systems, kinship-groups, language etc*)
2. By what is it being supported?(*institutions, organizations, physical elements, settings in different scales etc*)
3. How is it being supported? (*i.e.what mechanisms are involved*)

In applicability to this research, enablement is in relation to supportive environments, design, and policy, which are of major importance to HDS. It is observed that the policy outcomes for professional architects inadvertently dictates the design and are evident in (the design) trying to adapt to the policy. If the policy is the provision of single-family house form, design tends to respond to western dictates rather than impose a patriarchal commune in the form of traditional courtyard house. To avoid such approach to design process, MER provides the theory for identifying the relationship between the supportive elements of the built environment and culture-core elements thought to influence lifestyle and the mechanism for support (meaning, standards, preferences, images, schemata, and latent aspects of activities as the variable mechanism for acceptability).

Therefore, in considering the arrangements among actors/partners, it is imperative to delineate environmental profile/characteristics in relation to lifestyle profile of the middle-income groups (as stratified in terms of income and viewpoint in this research). By so, unbundle the cultural variables implicit to housing and its settings. From the foregoing, it is evident that partnerships would be more readily visible from the culture specific variables that Man Environment Relation sets forth as its thrust for understanding development for third world countries given their antecedents and this validates the design approach to this study.

In this research, the concept of public-private partnerships is based on the enabling approach (World Bank, 1993; UNCHS, 1993). The primary objective of the enabling approach is to improve the efficiency of the housing sector by the public sector concentrating on eliminating constraints on both supply and demand to create the ambience for positive utilization of private resources (Angel, 2000). Theoretically, the notion of adequate housing delivery by this research is premised on the need to strengthen public-private partnerships towards restructuring existing institutional and organizational arrangements in profiled housing delivery

systems using MER criteria (from, design-culture, environment-settings and policy framework). This is hinged on the fact that by determining ‘adequacy’ contextual to settings, the housing delivery systems would be strengthened (specifically through partnerships reorganizations) for the delivery of more houses (quantity), better houses (quality) and improve quality of life/housing environment of urban dwellers (lifestyle).

This MER applicability of this study is in relation to housing provision in terms of; quantity, quality, and quality of life (lifestyle) considered as the 3Q-factor for outcome-determination of adequate housing delivery. The significant relationship between HDS, PPP, and AHD and the correlation between the process issues and resource optimization informs the direction of this research in its primary objectives.

### **3.2.5 The General Systems Theory**

This research recognizes an underlying theory for the body-specific knowledge it intends to adopt in unbundling the housing delivery debate as systems based. In the understanding of housing delivery systems (HDS) from the open literature, most proponents share the common opinion that housing is system based (Prins, 1994; Aradeon, 1978; Onibokun, 1974) and comprises of variables and forces from different fields of study which are influential to the outcomes. Therefore, it is inevitable to consider the general systems theory and the basic characteristics, which explains the dynamic nature of housing as a wholesome process with interacting parts. This research considers two wholesome processes in interaction with each other within a formalized third scenario namely; Public, Private, and the Public-Private processes of housing delivery as socio-cultural, political, and economic systems within a man-environment relation framework for design intentions and realities of spatial use. It is within the GST theory that empirical analysis of the related parts to the whole becomes more explicit given the huge data involved in the understanding of housing delivery systems. A proponent of this theoretical approach to researches in relation to systems posits that:

*‘the General System Theory enables by methodology an important means of controlling and instigating the transfer of principles from one field to another, and it will no longer be necessary to duplicate or triplicate the discovery of the same principles in different fields isolated from each other’* (Bertalanffy, 1950 in Bello 1985:139).

This means that a concept of wholesomeness and integrating elements when statistically analyzed in relation to a given system would produce similar results in any setting. The identification of research variables and indicators for measurements enables the application of this theory. General Systems Theory is broad-based in its flexibility and would be applicable in

accommodating the linear differentiations and relationship modeling at the same time) of variable parts to the entire whole. Therefore, the notion of this research is explained philosophically by the GST theory with a consequent modeling using the conceptual basis of this mathematical tool as follows;

*‘The General Systems Theory does not absorb mathematics. The latter continues to be the universal language, suitable for expressing completely formal notions-which is what the theory of systems wants. This theory proposes to model certain aspects of reality, and mathematics works as the medium through which the modeling can be done (Bello, 1985:143).*

By applying GST to the notion of regulation (feedback/cybernetics), the mechanism of selection of variables is divided into three parts namely, the object of selection, the agent of selection and the basis of selection. All three informs the criteria adopted for this research as shown in table 3.2 below.

**Table 3.2** GST Selection mechanisms in relation to stakeholders’ delineation and HDS.

| <b>GST selection mechanism</b><br>(Criteria for selection) | <b>Stakeholders’ Adaptation</b><br>(development of dependent variables) | <b>Influence on housing process</b><br>(development of independent variables) |
|--|---|---|
| Object of selection  | Households  | Influences of Lifestyle-in culture-specific terms of design                   |
| Agent of the selection                                     | Actors/partners   | Influences of arrangements; institutional/organizational                      |
| Basis of the selection                                     | Experts   | Influences of Theory/policies   |
| Outcomes of GST applicability to HDS                       | Optimizing Resources into Process                                       | Optimizing Process into Product   |

Source:Author

### 3.3 Conceptual Framework/Models used in this Study

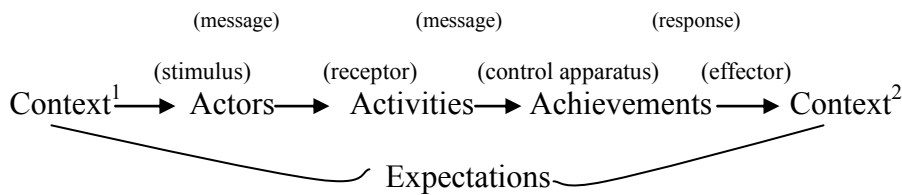
#### 3.3.1 Models of Housing Delivery Systems

Three models thought to be relevant to this research from the forgoing literature help to establish a new model, which this research proposes as appropriate for HDS in relation to its elements, PPP and AHD. They are discussed below.

#### 3.3.2 Systems definition of housing

Turner,Fitcher (1972;158) an adaptation of Ludwig(1968 in George Braziller).This model presupposes that a housing systems is bounded by a stimulus context and an effector context within which exist actors,activities and achievements. In figure 3.4, the context-1 and context-2

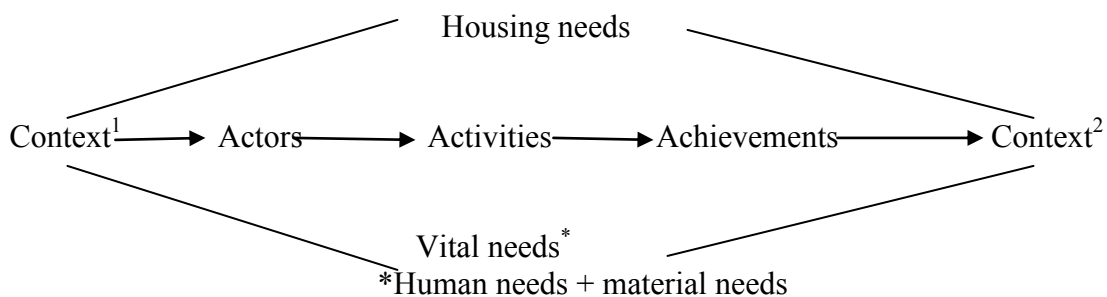
shows the feedback sequence of information flow between the start point of the system and the end-point. The flow is essentially unidirectional with subjective tendencies to actors, and activities.



**Figure 3.4** Original model by Ludwig.

**Note:** This is based on the assumption that the context, including the products of process is different from the context that instigates.

### 3.3.3 Modified Model; general systems theory definition of housing Turner, Fitcher (1972; 158)



**Figure 3.5** Modified model of Figure 3.4

In the modified model in figure 3.5, other material and non-material needs were included. They are the housing needs and vital needs (i.e human and material). This research draws from the applicability of the systems theory in the most basic form in housing as described in figures 3.4 and 3.5. This rudimentary application emphasizes the notion of stakeholders (as actors), activity settings (activity) and housing objectives (as achievements).

### 3.3.4 Prins model for housing delivery systems

In order to delimit the applicability of the systems theory in housing, this study investigated the activities between context 1 and 2 in figures 3.4 and 3.5 by using the process function of Prins (1994:43) which identified the general factors of a housing delivery systems. This is derived from the input of resources as it applies to the delivery process of housing. Definition of roles based on social structure fulfilled by actors is the basis for the process function delineation. These process functions are nine namely, initiation of the project, provision of land, financing, planning, design, authorization, construction, access mediation, rights of occupancy and



management. Actors may be individuals or groups and they have certain degree of controls over one or more resources and they participate with various goals in mind depending on what is motivating them (material and non-material housing needs). In understanding the motivation behind their goals, three domains (called institutional domain) were defined based on the goals of actors namely:

-Subsistence domain; this entails individual/s households performing housing delivery functions for their personal/ collective consumption.

-Commercial domain; this entails for profit performance of housing delivery functions by relevant actors.

-Public domain; this entails the provision of housing at moderate cost and usually not for profit by government institutions and non-profit organization most time the motivations have an underlying context; for government it may be need for political legitimacy.

To understanding this model, Prins (1994) developed a matrix of housing delivery functions for analyzing housing delivery systems as shown in table 3.3, and in Nigeria, PRC developed a major delivery system as shown in table 3.4.

**Table 3.3** Prins matrix of housing delivery function for analyzing housing delivery systems

| Process functions         | Institutional domains |            |        |
|---------------------------|-----------------------|------------|--------|
|                           | Subsistence           | Commercial | Public |
| Initiation of the project |                       |            |        |
| Provision of land         |                       |            |        |
| Financing                 |                       |            |        |
| Planning and design       |                       |            |        |
| Authorization             |                       |            |        |
| Construction              |                       |            |        |
| Access mediation          |                       |            |        |
| Rights occupancy          |                       |            |        |
| Management                |                       |            |        |

Source;Prins (1994:43)

**Table 3.4** Major delivery system option for development of strategy.

| S/N | Strategy Component          | Major Options  |
|-----|-----------------------------|--|
| I   | Policy & Sponsorship        | 1. Strong central control<br>2. Distributed central control<br>3. Following distributed control  |
| Ii  | Policy & Sponsorship        | 1. Minimal intervention<br>2. Land assembly<br>3. Banking and projections  |
| Iii | Finance                     | 1. Minimum public intervention<br>2. Centralized public system<br>3. Decentralized public/private system   |
| Iv  | Infrastructure and services | (No options considered. Continued public effort to increase off-site capacity in conjunction with urban plans, is assumed basic to all strategy. On-site infrastructure included in component v) |
| V   | Construction                | 1. Minimal intervention<br>2. Rapid capacity expansion<br>3. Dependency reduction  |

Source: PRC (Nig) Limited (1982).

By dismantling and re-synthesizing figures (3.4 and 3.5) and tables (3.3 and 3.4), it is possible to relate the elements of process function (Prins, 1994) and strategic elements of development (PRC, 1982 in Gyuse, 1984) in HDS. The outcome is delineation into two groups namely:

- The Resource based concepts for HDS (policy, finance, land, human needs etc)
- The Process based concepts for HDS (Construction, authorization, access mediation, material needs etc).

However, figures (3.4 and 3.5) and tables (3.3 and 3.4) did not take into consideration the implication of the ‘social based concept’ expressed as culture. They failed to recognize that central to the housing debate is stakeholders’ responses to policy and institutional frameworks as observed in the literature review of this study. In addition to the first two groups, this analysis adds a third grouping called ‘the social based concept’ as an important component and concept of HDS.

The third grouping ‘the social based concept’ originates from the organizational arrangements within ‘settings’ (environment, and activity). This is in terms of the housing typologies of a given society. In this case, four typologies in relation to PPP is the basis for analysis. The housing typology is often the outcome of the HDS implemented. The degrees to which the quantity, quality, and environmental quality of the housing are measured forms the constant for evaluating outcomes in this study empirically.

Therefore, Housing Delivery systems (HDS) are the mainstream mechanism for transforming housing objectives into tangible house-form within environment settings. This succinctly involves resource optimization and process optimization to achieve planned objectives. In our development, HDS comprises of subsystems; each subsystem contributes to the overall outcome of HDS. However, each subsystem maybe different in themselves and may not exhibit attributes of HDS on their own (as observed in the systems theory of Bertalanffy in Bello,1985). For example, Finance and PPP are subsystems to HDS but reflect different attributes. Then, Public Private Partnership (PPP) as subsystem of Housing Delivery systems (HDS) is one form of delivery mechanism to achieve HDS objectives. The elements of PPP are indeed the determinants of PPP as previously deduced from the literature.

### **3.3.5 PPP Models of Housing delivery Systems**

The applicability assessment model for partnering (AAMP) is a process model that provides a systematic framework to evaluate whether and how to utilize partnering in a certain situation. (Shaokai and Yan,2007). It focuses on factors associated with management mechanism on the one hand, which is relevant to the process function of management and overall management of the housing process. It is a stage-based model and the various stages of AAMP are as follows:

-Stage 1: Once partnering becomes an option, then identification of factors associated with the project dimensions, establishment of the functions of the project, identification of project scale, cost, design and resource availability, and then analysis of the motivation for potential participating partners before establishing commercial and social benefits would follow. It is evident that from this model establishment of non-commercial benefits is relevant to the project initiation process and this was significantly missing in previous models as in Prins, (1994).

-Stage 2: At this stage, the gains for partnership among alternative partners for same function/roles are compared with the expectation of the project. Then, the results can be utilized to formulate a multiple evaluation criteria for partner's selection (based on commercial stability, technical skill. culture, process etc).

-Stage 3: This stage entails the selection of partners by rectifying goals/contributions alongside motivation.

-Stage 4: The introduction of a general partners' thrust/philosophy; this is succinct to the project objectives and application of management mechanism for partnership.

Stages 1-4 shows that, the social implication on the overall project-partnering pathway is vital to the success of the project and most practices have failed to pay more attention in this regard. This is supportive of the need for a real definition of the project thrust in terms of its stakeholders' philosophy largely. Martimort et.al (2006) suggested the need to design the project with a thrust/philosophy through the following partnership basis:

- Design the characteristic and quality attributes of the project
- Choose the private sector builder to build and government retains the asset (in the case of BOT).
- Choose the operator; public/private to manage

This analysis bundled the building process and management stage while unbundling the ownership structure.

From the foregoing models, it is important to note that the housing delivery systems (HDS) within a given setting can be stakeholder categorized in terms of the household, housing development partners/actors and experts' thrust or philosophy. This requirement initiates the housing process functions as indicated by Prins (1984); and it is in direct response to the motivation to create housing within the objectives set forth as universal in this study.

In the development of this framework, the stakeholders categories of thrust for HDS could be any of the objectives (thought to be essential or desirable and in this case of PPP, they are the determinants thereof already stated in the literature). They maybe subjectively deduced from among the housing objectives depending on the relative tilt of the housing development actors/partners, experts and yearnings of householders; therefore, a PPP that is subjective and border line in approach stabilizes capitalist market economies. However, this framework does not suggest that there would always be a convergence in the objectives towards a thrust since sometimes a stakeholder may decide against all others' for any reason to favour a particular objective as its thrust for the HDS: for instance, an eco-friendly housing estate is a HDS thrust in broad terms. In this study, where PPP is the thrust, there would be applicability of convergence from both the Public sector objectives and Private sector objectives as suggested by Kemmenys' (1998,2010) theory of convergence. Such convergence accounts' for the massive economic black hole in the housing markets of the United States of America. A federal tilt in favour of salvaging the situation simply kept the private sector sinking further into the abyss, a danger of strict convergence in housing, (Kemmeny, 2010). This study uses convergence to articulate its objectives while using divergence to express HDS thrust directly or through inherent subsystems.

Therefore, an attempt to avoid the above danger of the convergence theory, there is need to create a region of divergence for equilibrium in any given HDS thrust (to attain measurable efficiency). It considers the duality of convergence and divergence in terms of regions; taking convergence to be the lower region and divergence the upper region. This is whereby the elements of choice of an HDS would tend to either converge in a thrust or in their divergence accentuate yet another thrust. The upper region is the output region and the region of divergence for expressed HDS: While the lower region is the input region for unifying housing objectives. This upper region of divergence takes into account the plurality of operations for expressing HDS. However, the outcome is the housing typology, which is a composite expression irrespective of the HDS. The basis for the polarity (of convergence and divergence) expressed in this study is in terms of adequacy, since this is the adopted framework for partnership; and this accentuates partners' contribution to the overall HDS thrust. Therefore, in the development of this framework, this study considers the setting within society and environment as consistent in nature to the entire HDS.

From this research development, the following HDS thrusts emanated in the literature:

- Tenure based models of housing delivery: rental or ownership structure models.
- Finance based models of housing delivery: Mortgage models, subsidy models, or a hybrid financing option.
- Construction/building activity models: This is based on the process function model or traditional models. (The traditional model is in total exclusion of regulatory systems of modern/western legislation and which is not the focus of this research as it primarily negates the basis for PPP).

In order to achieve the housing objective (which is generally accepted from the literature reviewed) implicit to HDS; there is the need for increase in quantity of housing, the quality of housing and the improved housing environment quality which comes with every development program initiative. Then, a particular thrust as above would take pre-eminence as the central motivation around which every effort revolves like a pivot. Although, the HDS thrust seems objective, unfortunately it is the decisions of the housing development actors/partners that make for its subjectivity at any given point of the resource and process optimization.

The point of note is that no two models as above are equally as prominent for any given project. Therefore, the clue is to identify the actors/partners and their motivation and evaluate the degree of readiness to collaborate and then determine their effective partnership and

forecast their possible results before embarking on the project. Since, objectives form the basis of partnerships for which results are appraised with regression methods. While the study does not apply the regression method to analyze its data, the proposal will develop a theory based on the ability to forecast the consequences of actors/partners' actions before project initiation. Herein is the basis of the contribution PPP stands to make in HDS.

### **3.3.6 Planning Models for Housing and Construction Sectors**

In the construction sector, most planning models for housing/building construction are an assemblage of objectives, targets, and risk reduction/removal of operational constraints. The operational methodology to modeling is an adaptation of 'holism' in scientific terms alone. This totally neglects the non-scientific elements associated with the subjectivity of stakeholders (social needs, cultural values, perception of good or better environment etc).

In order to connect housing and the construction sector, three conceptual essentials to this study are discussed below:

Firstly, there is the need to establish a 'development concern' for societies. This need is perceived and expressed as a fundamental thrust for that socio-cultural setting otherwise the outcome of such development concern (in terms of building form/space) faces rejection directly or passively by the society (in some cases abused by way of vandalism). Therefore, in practice every other item of development becomes subservient to that perceived 'development concern'. Where this is strictly housing then, all arrangements tends to tilt in favour of the development concern until the yearning of the society is achieved (ditto security, reconstruction after a war or a bad government etc). By so, the potential for growth maximizes the tilt in all facets except that, only a single development thrust tends to be more vocal than the rest per period.

Secondly, the outcomes of benefits in employment creation are also a potential for growth in the construction sector. Apart from the beehive of activities generated by the construction industry, there is a general ambience of hope in societies wherever massive construction development is in progress. This implicit social value is often ignored.

Thirdly, the determination of an appropriate technology for the building process as well as skills transfer and improvement of adaptive technology within the socio-cultural settings goes a long way to improve the poor social capital within any given society.

By integrating the influences of appropriate technology, job creation that is implicit to 'development concern' in social terms, planning models would fulfill accentuated aspiration of stakeholders and thereby improve the sustainability of development programs.

### **3.3.7 Theoretical development for HDS, PPP, and AHD**

The implication of too many information's and disconnected pieces of empirical research are indicators for the need of holistic theories in housing (Rapoport, 2001; Brandsen, 2001). Theory is needful to subsume much data by compressibility and it improves knowledge dissemination and applicability in various scenarios. The use of Generalization, recognizable patterns, and regularities are attributes of a good theory (Rapoport, 2001).

In the development of this research, the tested theories in housing cited herein exist in association to the elements of systems, partnerships, and adequacy that are subsets of the core subject of investigation. The holism needed to understand the embodiment of all three elements acting in synchrony is limited in this regard. Even then, systems theory provides a plausible lead in this direction and it is only critical to the process problems of HDS.

However, to solve the research problems, this study relied on the plausibility of various theories to inform the outlay of PPP towards achieving AHD. The study draws from the enumerated theories of GST, MER, market-economy in urban democratic settings in relation to the 'activity settings' of stakeholders in specific housing and the AAMP of operational research to develop a conceptual framework. The following elucidates the approach to theoretical and conceptual framework of this study.

-Theoretical framework: Housing objectives elicit outcome (succinct to the research hypothesis).

-Conceptual framework: PPP improves actors/partners AHD

Therefore, the unification of housing objectives reinforces the outcome into a 'thrust'. A weak and poorly defined objective births a weak thrust. The housing debate is full of various objectives (in relation to optimizing housing 'processes' and 'resources') that are subject to the arrangements among households, actors/partners, and experts called stakeholders.

The conceptual framework specifies PPP as the variable under exploration within the context of HDS; and that PPP which represents a particular housing objectives called 'thrust,' improves actors/partners AHD (defined by the 3-Q factor delineated in this study as the universal objective of housing).

To analyze this relationship, the hierarchy of HDS, PPP and AHD became relevant in the order so stated to dismantle the elements and subsets of elements identified as determinants towards achieving efficient outcomes of housing objectives.

### **3.3.8 Schematic Model of determinants of HDS, PPP and AHD for the housing process**

The conceptual framework adapted for this study is based on schematic models by Ludwig (1968), Turner (1972), from theoretical models by Prins(1994), PRC(1982), and mathematical models developed by proponents of PPP Matrimort and Pouyet (2006).

The theoretical and mathematical models are utilized to explain the delineation needed for optimal division of labour between public and private sectors in modern industrial organizations; thus identifying the high points for efficient contribution and removal of risk areas to both sectors in terms of moral hazard and investment respectively.

The schematic in figure 3.6 shows the relationship between the determinants of housing delivery, Public private partnerships and adequate housing delivery in the housing delivery process. The schematic model suggests a relationship pattern based on the factors and their likely influences on the specific function in the housing process. Prins(1994) suggested nine specific housing function in relation to the housing process as a continuum; this research suggest that the Housing delivery system is different from the standards and settings which creates adequacy benchmark but, are basically working together to delineate the emerging partnerships. Prins' analogy is useful in delineating the housing delivery systems in terms of the housing delivery process but not in terms of the stakeholders' delineation in relation to housing objectives.

Therefore, it does not quantifiably describe the settings for adequacy. The research model redefines' 'Adequacy' in terms of four broad based elements namely; the house unit, the housing setting, housing production and the specific housing process limited by setting. It does not assume that adequacy should be an outcome of stakeholders' involvement (i.e. housing households, housing development actors/partners and housing development experts). The transmitted error of ignoring this vital aspect is that 'copying' becomes the template for standards (for most emerging economies of the world), as described by Rapoport (2001).

The settings are products of existing criteria (knowledge base/social capital; ability to coordinate and translate aspiration into effective actions), if inadequately informed or unprotected from partners (with other motives other than the housing creation) then, the



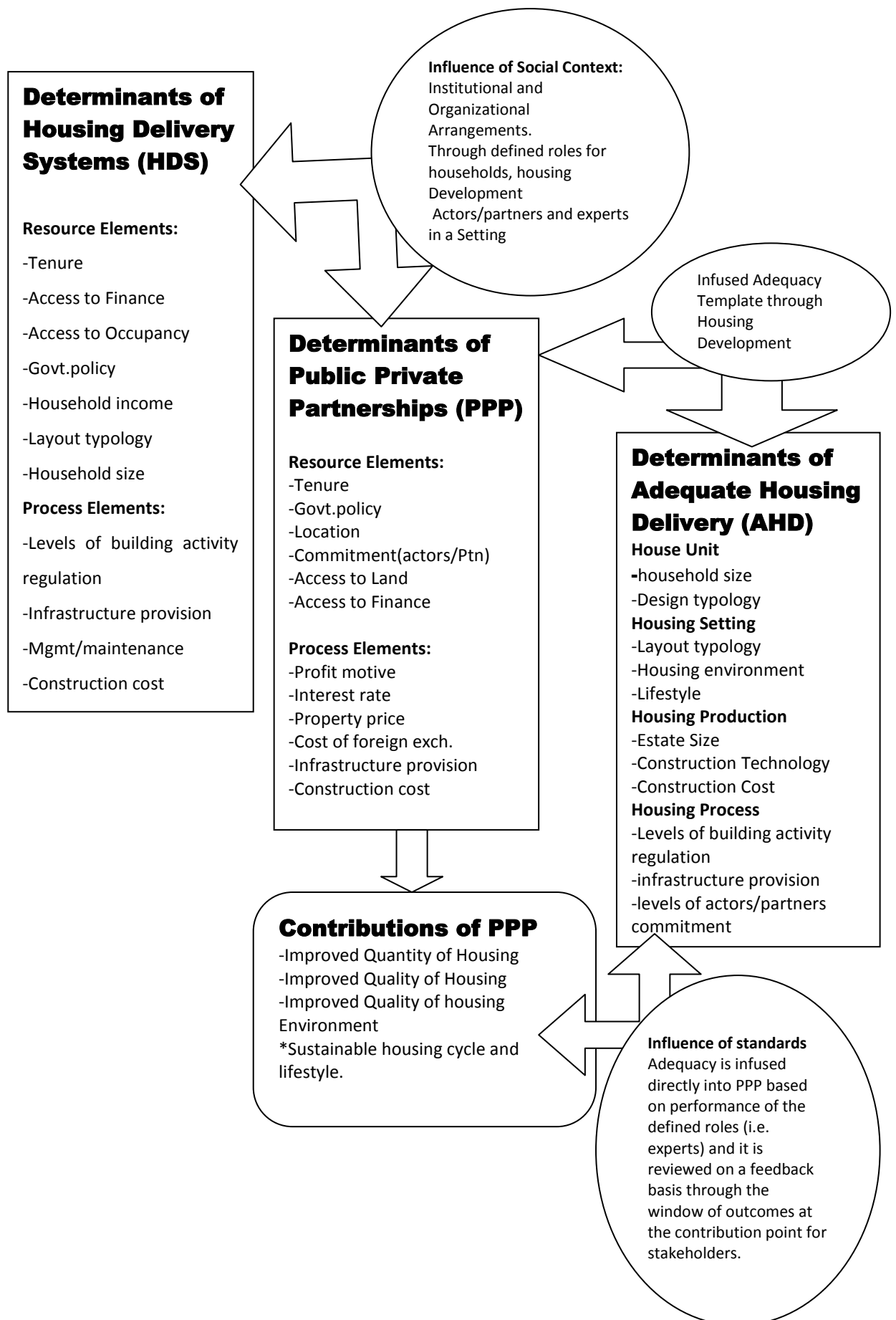
objectives of housing programmes will not be realized. For example, in a PPP, the private sector partner could tacitly introduce superior design-typology presentation or cheap funding to influence the thrust for a specific housing programme. This could mislead the PPP into adopting a technology that infuses tacit profit-motive reasons by the private sector partner. The outcome could create socio-economic imbalance for that setting. This is usually the case between developing countries and the developed countries; whereby, funding is tied to the importation of technology (and sometimes outdated) at a high cost, and this negates the subjective thrust of the PPP (Angel, 2000; Hunter 1981).

The relationship between HDS, PPP, and AHD is as delineated in the schematic model of figure 3.6. The indicators of HDS are the determinants and similarly those of PPP and AHD. However, the PPP is earlier stated is a subsystem of HDS but interact independently with HDS based on the influence of social context; defined by the interaction within the institutional and organizational arrangements of households, housing development actors/partners and experts who form stakeholders within their settings.

It is from this platform that coalitions occur for or against the realities of planned objectives. The feedback on housing objectives is delineated from the determinants of AHD as it affects the four components of adequacy already defines and shown in figure 3.6.

The resolution of these components in relation to the housing objectives derived from the PPP arrangements is the effective contribution of PPP expressed as outcomes of the universal objectives (the 3-Q factors).

By this model, the HDS is unbundled into the elements of resources and process for the purpose of optimization. Where this exists, the influence of reforms would need to be understood in order to avoid previous misgivings about models. This would inform the applicability of the model in various scenarios.



**Figure 3.6** A Schematic model of determinants of HDS,PPP and AHD for the housing process (Author). (Adapted from Ludwig (1968), Turner (1972), Prins(1994), Ogu,2001; Aradeon (2005),Ying (1997)

### **3.4 Origins of Housing Policies and Concepts**

#### **3.4.1 Housing Reforms/Policy paradigms**

In establishing these origins, it is important to note that much of the literatures in relation to traditional Africa (pre-colonialism) are extinct (Etuk, 2008, Huntar, 1981). Therefore, an attempt to trace these origins (in the African context) from a philosophical and ideological viewpoint is limited. Nonetheless, common to most literatures is that, housing for pre-colonial Africa was self-help and community based (Hunter, 1981; Allister, 1968). Unfortunately, the level of civilization associated with this analysis draws from the documented relics of architectural typologies that were preserved which are the physical elements of the built environment.

Therefore, tracing the ideological movements and theoretical evidences that were the drivers of housing delivery systems such as social, cultural, economic, and environmental which were proofs of self-determination is near impossible, since the evidences were wiped out by the invaders and conquerors of Africa rather than preserved (Huntar, 1981). Hence, only iconographic evidence of the arts denotes the complete lifestyle of the African people (ibid). Since the bulk of Africa's existing social symbols indicate the extent of social organization, it is theoretically appropriate and conclusive to accept vast evidences of communal living in Africa by the open literature as a pointer to the early pace that African settlements had set prior to Arabic and European incursion. Such communal and activity settings took care of planning, architecture, infrastructure and the housing delivery system.

Inadequate housing for a given community was never a problem identified in the course of traditional African history. Identified land tenure systems were very sustainable prior to democratic capitalism (Huntar, 1981; Njoh, 1999; Tordoff, 1984).

However, the traditional origins of housing have evolved over the years into a globalized nature, in terms of spatial composition, material/technology specifics, and functional-use as it obtains in most urban centers, which indicates variable settings due to culture specific requirements. This trend is traceable to the triumphs of Europe and the industrial age (Huntar, 1981; Njoh, 2002; Aradeon, 1978; Uduku, 2006; Bouer, 1974; Mabogunje, 2002); and expressed in the need for rapid industrialization, and the creation of exploitative market economies. This is evidenced in the emerging working class delineated socio-economically as the single-family from where the social burden to develop single-family houses originated predominantly in industrial Britain (Pugh, 1980; Hunter, 1981; Aradeon, 1978).

More so, as the socio-economic need for more housing advanced, the forces of demand and supply alongside the benefits by private enterprise to cash in on surplus value accumulation became inevitable. This led to government intervention and the reforms that followed (Pugh, 1991).

#### **3.4.1.1 Emerging international policy paradigm**

The origins of formal housing reforms in industrial Britain are traceable to utilitarian political theory (Jeremy Bentham, 1748-1821) and economic theory (Ricardo, 1772-1823). The utilitarian concept sought institutional arrangements through advocacy of greatest good enjoyed by greatest number of the public. Advocacy proponents like Edwin Chadwick played vital role (1800-1890) in the labour related housing reforms of that era and as reflected in present day British housing arrangements. Ricardo's economic concept categorized land, labour and capital, by so explained economic value, distribution of income and the course of long-term economic development. The outcome was the support of private enterprise to provide adequate housing, which led to a new class of industrial capitalist that took advantage of inherited landed wealth of the public (Pugh, 1980; 1994). This trend led to social unrest and protests and ultimately government intervention as it was evidently anti-social in nature and failed to achieve the 'greatest good' objective.

Secondly, there was the Conservative idealism. The proponent Sir Ashley (1801-1885, who became the Earl of Shaftsbury in 1851), was noted for introducing housing measures in parliament. He argued in favour of stronger public policy roles; the need to give local government powers to build and manage housing, establishment of re-housing plans as a requirement of redevelopment by railway companies and other redevelopers and encouragement of local government activity in dealing with unfit housing.

The third major reform was the Transformation liberalism. The thrust was to establish social rights claims to those goods and services having special significance in humanitarianism and civilization. Whereas, the socialist thought was more of an opposition to profit materialism, which centered on the social injustice of capitalism. These concepts of social existence so far had much impact on the housing reforms of the early formal housing delivery concepts during the industrial revolution in Europe.

However, the Marxist conception argued that, in organized housing (as an investment); private property owners take away (exploits) some value from tenants' productive income and thereby acquire surplus value (which is unearned).

Over time, theoretical ideas on the 'welfare-state' deepened and housing became more thoroughly involved with the course of public policy, which gave rise to the idea of collective efforts towards the use of state power to achieve social reforms and hence the provision of housing. It is from these directions that most government gradually took the initial provider paradigm that has lingered for years to come.

It is evident that it was Adams Smith's (1723-1790), advocacy that brought to lime light the virtues of the market system, which was followed by his successors' (Richardo) theory of value, based upon labour cost rather than market pricing. To this end, the market economist will perceive housing as a commodity or a bundle of services traded among many buyers and sellers with few restrictions on entering this market. The logical outcome in a healthy market is the 'competitiveness' that controls service delivery and price mechanism as advocated by Marxism.

However, the emergent social democracy developed by the British Fabian society (1884) gradually gave a voice to peaceful legislation in housing from which began a reduction of economic inequality. The evidence in housing was in the widened gap between the property owners and the masses; and so, the inevitable need to inject markets with elements of morality as instruments of controls. This led to the modification of utilitarian emphasis of liberalism into transformed liberalism (Pugh, 1980).

By this period in history, the acquisition of Lagos as a Crown Colony to Britain in 1862 was in effect and in 1899, the Royal Niger Company obtained a royal charter to administer the territory in which it operated. The increasing need for peaceful legislation in Britain was beginning to take its toll in her colonies like Lagos. It is evident to note that as Britain experienced reformatations in its polity, a lifestyle of syncretism were been sown in her colonies (Aradeon, 1991). The influence of such syncretism would be obvious in about a hundred years to the socio-economic detriment of the colonies.

In analyzing these influences with specific reference to policy, Pugh (1980) gave an incisive account. In his analysis of housing reforms, he identified three stages of evolution in the housing experience of most capitalist democratic societies as follows:

- That housing concerns is motivated by needs and problems of industrial development.
- That social needs triggered an emergence of commoditization of housing (implicit on problems created by industrialization)

-That competitive interest of private and public initiatives marked a development towards national comprehensiveness and co-ordination in housing policy.

However, in specific terms of the subject of housing delivery systems the housing estate became the wholesome vehicle by which housing development was socio-economically packaged. The notion of endless communities bore various social problems and the need of nucleated forms to suit the purpose of its promoters grew in acceptance. This charted a new course in the way people aggregate within cities with the increasing need to delineate public notions from private notions of the dwelling house.

It is therefore important to mention that the origins of this pattern is traceable to nineteenth century reactions by professionals in New York and Britain whose need to re-inventing the city from a deplorable state were motivated into designing new towns. As seen in attempts by “*Architect James Ware of New York as well as Architects Robert Owen and J.S. Buckingham in London (who) came up with utopian proposals for model cities. By the middle of nineteenth century, English industrialists alongside rulers of Germany, England and France caused some model dwellings to be built*”

(Gallion & Eisner, 2004 in Nubi, 2009:3).

Over time, the competitive interests of public and private initiatives within a nationalistic socio-political and socio-economic framework became relevant to the understanding of the arrangements in housing delivery systems. The finer issues of adequacy and the emergence of public-private coalition rather than previous competitiveness marked the needed change for convergence and comprehensive inclusiveness. This is a clear departure from previous assertions of inclusiveness, which maintained the divergence of inputs into the housing delivery systems.

#### **3.4.1.2 The State and Power relations in Housing Delivery systems**

Through the emergence of the state, colonization became the tool of governance as seen in Lagos. This tool became an adaptive instrument for social and physical change in colonies uniquely; territorial delineation, living habits, and styles were drastically changed.

In Nigeria, the first indicator to this change was the acquisition of Lagos as Crown colony in 1862. Then, the Niger Delta region in 1885 and expanded in-land and renamed the Niger coast protectorate in 1893; by 1899 the Royal Niger Company was granted a royal charter to

administer these territories and by January 1<sup>st</sup> 1900 Britain assumed authority over Nigeria and structured it into three separate units of northern, southern, and Lagos colony (FRN,2008).

The transformation of Nigeria under British imperial domination took effect by 1914, through the amalgamation of the northern and southern protectorate under a Governor General. This marked the origins of the 'Nigerian nation-state'. During these periods modern housing based on the single-family model was entrenched by the colonial masters and the key beneficiaries were the expatriate colonial workers who served and protected British interest and a few indigenes that formed the social focus group and served the interest of the British (Aradeon, 1978). While the building technique and construction material content was emulated by a few indigenous merchants and Kings who could afford it, the process of adaptation by the larger society had started by the use of imported corrugated iron roofing sheets(locally called zinc) as against the use of thatch. The emergence of the colonial style housing surnamed 'tropical architecture' (by modernists in the Academy of Architecture) became a state driven architectural style for public projects. This style won the admiration of emerging elite who benefited from coalitions with the colonialists (Uduku, 2006; Alabi, 2000). The defining moments for architectures' input in colonial Nigeria continued for over a hundred years with very little input from the indigenes. It was on this premise that the future federation (in 1954) emerged. Nigeria obtained independence on October 1, 1960 and subsequently becoming a Republic by October 1963. These events, which led to self-rule and a government of national unity, have greatly changed the directional outlay in the housing delivery systems. Since emerging governments in response to the need for 'nationalism' tailored housing objectives and projects, along these lines (Guggler, 1982; Aradeon, 2000).

Common to this historical antecedents, is that the 'state' in this context remains a promoter of heterogeneous social groups (which this research calls social focus groups), that are perceived to be relevant to the stability of the nation-state. As the years went by, emerging groups upon realizing their personal weaknesses towards benefiting from the nation-state simply reinforced themselves towards obtaining their target objectives and improving their lot within perceived lines of state weaknesses as well. This evidenced in the housing delivery systems; whereby, social focused groups build their communes independent of state based regulation and were tacitly able to resist the state from expanding its housing programmes until the introduction of the Land Use-Decree of 1978. The benefits of this decree were short-lived and only fulfilled governments' ability to excise land for its use known to law as 'common good of all'. The majority of social focus groups and individuals simply applied for land and speculated on the value over time with no real intent for housing development. Even then, the enforcement of

nationalism comes with identity issues in the midst of ethnicity based power relations and access to Land becomes a melting pot for reshaping society. Since land is a vital element of the housing delivery system.

The emerging human settlement patterns in relation to power, allocation, and access to land logically defined the coalitions and those that ultimately give form to dwelling units. Hence, these outcomes are evident in the physical qualities of various housing schemes borne out of the needs of various social focus groups (such as railways, police, army, University lecturers, cooperatives, friends, families etc.). The promulgation of the land use decree was two pronged in effect; while it made formal land more accessible to the elite class, it also allowed them to acquire land and accumulate surplus value by speculating with land value.

The proliferation of land ownership by legislation resulted in the use of housing estate vehicles to redefine lifestyle among urban dwellers (Aradeon, 2009). Lagos continues to pioneer this drift as the effect of state and power relations in the evolution of the city is evident. While in industrial Europe, the state and power relations were the agitations of the labour force and unions, which sustained the industrial era and hence their implicit social focus group that was by nature, socio-culturally homogenous. The colonized territories/countries like Nigeria, unfortunately expressed similar attributes in two different ways through a heterogeneous social focus group (emanating from the public and the private sector of an emerging economy).

Firstly, through the elite class, that was the original public sector generated social focus groups. Housing for the indigenous public sector workers was based on the provider paradigm. In this case, the provider was the colonial government. In this group, housing needs were a pre-determined single-family itemized space-function relation by the colonialist. This is evident in the housing schemes implemented to serve the working class in the various sectors of the economy. The taxonomy of colonial housing discussed latter shows this direction. Spatial allocation was in relation to class delineation and not housing needs. The colonialist concentrated in providing target housing for its expatriate staffs and a few indigenous staffs in sectors like, public administration, defense, railways, health, Police, etc.(Aradeon,1982; Baradat,1997; Harpham, Boateng,1997).

Secondly, through the emerging private sector, affluent and middle-income indigenes (who obtained contracts from government and maybe sole agents of foreign companies, in wanting to enjoy a lifestyle of syncretism acquires land, and) tries to create his environment within an



affordable social context that is considered adequate along regulatory support if any existed in that environment setting.

Another dimension of housing to the power relation apart from government influence on overall outlook and outcome is the internalized relationship in formulating and dispensing regulatory framework. This is yet another determinant of power relations. The outcome is contributory to the physical form and the quality of the built environment. This is evident in the real estate development of most cities in Nigeria. There is a tacit approach to project impact studies and an unwritten code that very few developments will be discouraged on technical grounds of legitimate planning regulations. In Lagos state (which is the case study for this research), a consultants connectedness to state power (approving officers, commissioners and the governor) is required to access planning approvals. Where the state powers are too much of a deprivation for such projects, then, soliciting powers from above (wielding national powers) to achieve the housing objective of actors/partners become inevitable. Therefore, the nucleated development of housing and its delivery systems remain subject largely to state power relation implicitly, given its antecedents over the period under study in this research (Aradeon, 1980; Abiodun, 1974, 1980; Adeniyi, 1980; Akinsemoyin, Vaughan-Richards, 1976; Braimoh, Onishi, 2007).

#### **3.4.1.3 Social Arrangements toward Adequate Housing Delivery**

The housing estate vehicle for housing delivery remains a product of social arrangements among social focus groups around the world. The need to agglomerate interests in the choice of housing type, location and the factor of affordability remains a valid approach (Nubi, 2009). The agglomerations of interests are often in relation to surplus value accumulation over time by way of speculation or an outright socio-cultural need to connect with the lifestyle trends of ownership within settings. Housing need as a criterion is not the justification for most housing objectives among the middle to upper income groups who share power relations and hence upon whom the social arrangements for national self-determination rest upon.

Therefore, the social difficulties in delineating stakeholders alongside increasing urban population matched against cost of infrastructure development continues to direct the outlay of actors/partners decisions to favour the housing estate approach. The housing estate development approach is lifestyle based and isolates other citywide related problems from the housing estate or keeps it within manageable scale; households agglomerate in terms of affordability and access to land essentially.

Today's duality in housing delivery (public or private) has evolved over years. The adequacy of both the public and private initiatives remains disparate on several grounds of quality across the world (developed or developing). However, the need to meet the housing demand is common to both efforts. Social arrangements among actors/partners take its origins from the understanding of the housing settings, state and power relations.

Moreover, in Lagos, the need to operate in a typical urban capitalist economy remains the driving force for inhabitants. Since over the years the seemingly accumulated surplus value obtained by allocation of land from the public sector to beneficiaries have become memorable in terms of current value that they stand to benefit. By belonging to a social focus group implies access to benefiting from the enablement granted by the public sector such as the allocation of land or housing. In retrospect, stakeholders' coalitions tend to respond to future needs by way of 'speculation' on all fronts of housing development even where a lack of capacity to deliver such housing in real economic terms is evident. A good example is the Eko Atlantic City, a new area of Lagos, which would be fully sand filled in ten years time. This would entail sand filling the Atlantic Ocean inwards by two kilometers. The entire development is sold-out at an average cost of \$250USD per square meter of land and a minimum of 1000sqm to first hand buyers as at 2010.

Currently on the Lekki axis, which is the emerging Lagos Business district it is observed that most of the land within the economic promotion zone (EPZ) is sold out to speculators whose estates are unable to be actualized (field survey, 2010). This further compounds the nucleated nature of housing development in the city with weak circulatory linkages and several commuting bottlenecks, which requires huge capital investments in infrastructure development that is avoidable by proper planning, and partnership arrangements with civil society.

### **3.4.2 The World Bank Policy and Housing Reforms**

In the last four decades, the World Bank has influenced the housing sector, the need for development and financing of housing directly and indirectly is the main stay of current global policy direction. Most critics have maintained that the failure of the World Bank models for housing delivery was simply the failure of capitalism. One of such critics, Toussaint (2008:112) writes; ... *'the world bank recommended privatization of profits combined with the socialization of the costs of anything that was not directly profitable'*... This clandestine approach to funding massive and irrelevant infrastructural development projects at a global scale for local consumption remains unviable. Such white elephant projects are often never

completed or never utilized if completed by local communities and the WB takes no responsibility beyond funding.

In housing, these same principles have tracked the various epochs and regimes of housing theories and policy, which followed the funding of the World Bank (Smith, 1998; Robinson, 2002). It is evident that theoretically in modern parlance the Provider paradigm originated from the European experience and particularly that of Britain. It is imperative to note that the principal notion of the provider paradigm was to form the strategy for public sector involvement in housing delivery. The aim then was that public authorities should control the production of houses in order to reduce housing deficit and improve the quality of housing (Hamdi, 1991). This was with a view that this action would reduce inequalities in housing distribution and access.

However, there was the underlying notion that, the global impact of such direction is achievable at a large scale through the administrative and intellectual capacity of global institutions like the World Bank (Pugh, 1991; Toussaint, 2008). The housing process and resources' management developed output in terms of quantity and quality yet circumventing the socio-cultural and socio-economic variables succinct to housing settings.

In 1972, the World Bank commenced its participation and leadership in public housing in developing countries (Pugh 1991, 1994). Habitat-1, in 1976 was the first formal world conference on human settlements in Vancouver convened to address housing problems. From here, various insights into global strategies for adequate housing have been in constant debate.

The entry of the World Bank brought alongside elements of neo-liberalist political economy approaches into the housing debate and implementation strategies. This was widely accepted since the key problem of housing (as understood then) was the relationship between housing markets and financing (Pugh, 1991). This was evident in the massive government funded low-cost housing schemes and affordable housing schemes of that era across most third world countries like Nigeria. These housing delivery systems failed to achieve planned objectives.

The 1970's was another paradigm shift where the enabler/supporter approach became the new direction. This entailed the provision of sites and services, the encouragement and participation of corporate firm developers, small-scale builders and householders by facilitating and enhancing their ability and capacity to deliver houses and services financially (Ogu, 2001).

**3.4.2.1 The Provider Paradigm:** Pugh (1991) identified two phases of World Bank's intervention towards influencing global theories for housing delivery.

**Phase-1**, 1972-1983. Essentially a large-scale public sector investment into housing production, construction and standardization of the dwelling units for the poor: "affordability-cost recovery-replicability" (Essentially neo-liberalist). This was seen through massive provision of low-cost housing in developing countries. Therefore, this placed the responsibility for meeting housing outlays on government.

#### **3.4.2.2 The Supporter Paradigm:**

**Phase-2**, 1988-1990s. This was an official support for sites and services and general aided self-help. Coordinative reforms in national housing policies (neo-liberalist in approach). This placed the responsibility on private consumers in the form of loan repayment and cautions government against soft below-market rates of interest in housing capital arguing that this leads to arbitrary transfer of purchasing power between lenders and borrowers as well as causing dilemmas for financial intermediaries in drawing upon savings deposits to their full potential.

#### **3.4.2.3 The Enablement Paradigm:**

**Phase-3**, post-1990s. This period proposed a reduction of constraints and optimization of resources. Delineating the beneficiary of enablement became a critical issue for this policy approach in terms of the individual or the institutions/organization. The divided debate was on the strategies for implementation and the viability of beneficiaries for enablement, ranging from the popular sector, the markets or local governments or all. Recent ideological interpretations and emphasis of the enabling approach has gradually favoured the understanding of stakeholders in the delivery system, which consequently is birthing the theory of partnerships between two key actors; the public and the private sector actors (Sivan, 2001; Akomolede, 1990; Pouyet, Martimort, 2006; World Bank, 1993; Sengupta, 2006). In recent times, the strategy for the public sector is to concentrate on reinforcing the enabling approach through the localization of the institutional frameworks within its ambit while the private sector should concentrate on strengthening its organizational structure in a responsive manner towards the public sector (Angel, 2000; Melpezzi, 1990; World Bank, 1993).

**3.4.2.4 The Partnership Paradigm:** The import of the application of PPP in the infrastructure sector and general delivery of public utilities has seen levels of success in the United States of America and the United Kingdom (Spackman, 2002; Akitoye, 2002). Recent adaptation of partnership paradigm is evident in the housing sector of India with an appreciable success

(Sengupta, 2006). In Nigeria, most state governments are beginning to adapt PPP for housing delivery. It is in this direction, which this research intends to evaluate the contributions towards achieving housing objectives as another paradigm shift in the housing delivery systems by critically utilizing Lagos as the case study. Part of the framework for this study is based on the current power relation in governance and the need to delineate the social arrangements of both institutions and organizations succinct to HDS (Payne, 1999).

### **3.4.3 Delineating Partnerships**

The delineation of Partnerships in relation to housing delivery system and Adequate housing delivery dates back to the communal approach to housing delivery (Schwertfeger, 1971, 1982; Aradeon, 1991; Smith, 1998; Okpala, 1991; Marcus, 1974; Marris, 1962; Nwafor, 1979).

‘Partnerships’ have always existed among actors (Martimort, Pouyet, 2006). However, the partnership between “state” (government) which is referred to as “Public” sector and the non-state (non-government; whether for profit or not for profit reasons) called “Private” sector is the focus of this research. This is a new paradigm in the housing debate, to this end there is need to place in perspective the context of these partnerships.

Proponents of the enablement approach have initialized the basis for partnerships between public sector and the private sector through the streamlining of government-actor (public) activity towards creating enabling environments for the private investments to flourish; so as to reduce constraints for private sector investments and optimize resource allocation (Angel, 2000). This emphasis is from the viewpoint of power relations of the state and her social function as the provider of the enabling environment from which the private sector would be encouraged to participate. Whereby, the public sectors’ task is to remove obstructive constraints in the financial system, legal system and general accessibility to finance and land tenure.

Partnership in this context assumes that, the state is the ultimate arbiter of power; and that the state has the machinery for legislation and enforcement. The power relation paradigm based its assumption on the need for an equitable distribution of resources among competing interests, which is essentially Marxist in approach. More so, that the state is capable of taking wholesome technical and social decisions that would motivate the private sector to participate as well as influence their utilization of scarce resources towards the efficient delivery of housing among actors in the private sector (Witold, Henisz, 2006). Such broad based assumptions are certainly very unrealistic in heterogeneous, socio-cultural and housing settings

like Nigeria; where weak legislations regulates omnibus spatial design and allocation of resources.

That the “state” remains a critical mass in the understanding of housing delivery systems is an understatement and the evolution of any given state as Nigeria has a large part to play in its power relations and consequently the housing delivery systems among actors. Since the lifestyle which influences the city will be traceable to these sources namely; social relations among stakeholders, power relations between the private sector and the public sector partners, the need for the private sector to accumulate surplus value and the general class conflicts among social focus groups (Aradeon,2000;Adeniyi,1980;Zunino,2006).

Largely, the Lagos colony is as a separate entity in the national arrangement of Nigeria in its growth and social relations from colonial era until date as a mega-city. The dichotomy between the national government and Lagos is traceable to the power relations issues. Unfortunately, it is evident that, the status of Lagos would remain an independent entity whose peculiarities for stakeholders’ participation may never succumb to general theories given its historic conditions and evolution. In understanding the concept of partnership, it would be needful to trace partnership typology in the following subsections as observed.

#### **3.4.3.1 Private Participation/Partnerships**

The concept of private participation was first challenged theoretical by the Marxist theory in its attempt to explain social relations and the disadvantage for the state to create platforms for the private sector to capitalize upon and create surplus value at the expense of the less fortunate (Pugh,1980). The argument is that, such platforms create social imbalance and makes the rich richer and the poor more vulnerable and continues in the cycle of poverty (Olatubara, 2003; Griffin, Angela, 2001; Florida, 2000; Cohen, 2006).

In relation to the housing debate, it is a known fact that housing is the most basic and largest investment of the average household in their entire lifetime (Ojo, 2007; Okpala, 1978). Therefore, various levels of private participation require delineation for any given PPP framework. In Nigeria the context of private participation is strictly for two categories of actors namely; the private developer (for profit business concerns) and the social developer (not-for profit housing delivery concern). Unfortunately, only a strict document exist which highlights the criteria/guidelines for private participation in housing delivery (FMHUD, 2008).

Fundamental to the requirement for private participation in government PPP programmes is the proof of funds and planning layout/architectural design for the proposed housing estate. Usually, the housing estate derives its layout-typology from similar government planned layouts of the past, with higher density of households than the colonial era and a more compact neighbourhood, which optimizes the landed area. Unfortunately, such minimalist requirement is inimical to achieving planned objectives for housing. The common experience is that, the companies who apply and are eventually successful in securing government allocated land do so with the intent to obtain the title deed in anticipation of sourcing funds. Most times, they end up as speculators of the land they have tacitly acquired from government and never achieve the planned housing; and by so negate the essence of equitable distribution of the scarce resource (land) but enjoy the removal of constraints by government for access to land and tenure.

Therefore, private participation simply becomes a lucrative enterprise whereby private organizations focus on the private sectors ability to provide proof of financing to government. This is done irrespective of the lopsided equity that may emanate from such participation or they out rightly renege on their contractual commitments to government without consequences of revocation of 'title' and/or criminal prosecution for misrepresentation. This method of operation by the private sector has been successful in various adaptations as seen in other commercial ventures of government (such as oil and gas, telecoms and general privatization of Government Corporation).

The utilization of this method of private participation in housing is yet to yield the anticipated results in Nigeria due to the reasons mentioned above. Even though there are documentary evidences of its success elsewhere in the world, such as Asian countries facing similar housing deficit and delivery issues (Sengupta, 2006; Sing et al, 2006; Ronald, 2004; Zrudlo,1978). It is based upon this outside success stories that this research intends to examine the contributions and constraints in Nigeria within Lagos as a case study. On the contrary, a few are opinionated that Public-Private Partnership is an emerging concept and has not succeeded in housing, as it should have for various reasons (Melpazzi, 1990). One of this reasons is the dependence of PPP on a national policy framework, against a backdrop of project specific settings which relies on regional economics and this remains a complex mixture of influences and elements which are interwoven and intricate (Akomoledede,1990; Aradeon,1983; Awotona,1990; Balchin,1979;Bouer,1974). It is hoped that the improvements in social capital (Angela, 2000), of specific societies and their needs will improve the adaptability of PPP principles as they

emerge and are utilized more widely in housing delivery. Since the equality of partners understanding of PPP process is essential to its success (Shaokai and Yan, 2007).

One major adaptation of private participation is in public procurement. The British government has found this method more efficient. The private participant recovers cost and profit from the public by the government granting rights over a period, rather than perpetual lifetime rights. The queries that emanate are the process of selection of the private participant and the quality procurement. In the light of these queries, public procurement by the private participant were found to reduce the burden from government by her focusing on developing more appropriate policies (Spackman, 2002).

#### **3.4.3.2 Privatization in construction/infrastructure developments**

Similarly, the concept of privatization is yet another variation of private participation; often used to improve efficiency and in the development of infrastructure (Shaokai, Yan, 2007; Akitoye, 2002; Matrimort, Pouyet, 2006). The concentration for privatization within this framework remains a funding issue rather than that of performance. Since, the context of performance is from the perspective of funding and the need to increase efficiency. The terms of reference for efficiency here, is often that of returns, cost recovery and its implicit performance factors' which may not be equitable in various other contexts but dimmed beneficial to the evaluators who decide what is to be privatized and to whom should the access of short-long term or perpetual operator rights be granted?

The applicability in housing of privatization may not be in the strict sense of enterprise as above. In Nigeria, an adaptation was in the monetization of public service housing of the Federal Republic of Nigeria through direct sale to existing public service residents and other interests that are able to bid and win (The Guardian, 2007). By this process, government was able to relinquish its rights for a period of ninety-nine years (by way of a title deed), to all buyers of government housing within the sale period which was set and managed by the Presidential Committee for Sale of Government Property under the auspices of the supervising Ministry of Housing and Urban Development.

These properties included all colonial housing, postcolonial staff quarters, newly development government housing in all states of the Nigerian Federation. This sale afforded several affluent groups within the middle class and upper income social focus groups to purchase directly through bank loans (commercial and mortgage). At some point of sale, there are occurrences of tacit arrangements between government employees who were householders' residing in these



houses and affluent business men who could afford to pay government reserved prices. Since, householders/residents had the offer of first refusal; and so could go into financial settlement deals with these businesspersons from the private sector, that would pay off the householder a percentage of the reserved prices for granting access to purchase through their identity as beneficiaries of that civil service social focus group.

For instance, the average income earner who is on grade level 10 and 13 of the federal government salary scale according to Mabogunje(2007), would earn about N480,000.00(four hundred and eighty thousand naira only)per annum. It was based on this middle-income bracket that the federal government housing nationwide (of which 70%, of that housing stock was in Lagos) was sold to mostly serving government employees. Even though, government realized most of its projected returns upon the sale, it calls to question the morality behind such applicability of this approach to housing especially among the middle-income group that this research is focusing upon. It is evident that by their salary, they cannot afford to pay for those houses, yet the government policy was to privatize its rights and dispose of its liabilities to maintain and reap the accrued surplus value yet dismantling the very structure of social welfare upon which the entire institutional arrangements have rested in over fifty years.

The stakeholders' partnership is yet another key mode of partnership in housing. It is a direct attempt to re-invent the partnership concept and was used in Ibadan (south-west Nigeria in Oyo state), but was not successful (Ogu, 2000).The high point is the identification of stakeholders among actors. This in itself negates the fundamental issue of "equity" since common to stakeholders is their funding ability. This is in an economy where the average worker who forms the realistic basis for effective demand of housing lives below one dollar a day. It is simply futile to seek stakeholders from among them who would fit the framework for any known target-cost housing. Often times the stakeholders are favoured elites, friends of government officials or potential agitators against government that must be 'settled' to avoid a government-sectarian clash. In reality, stakeholders are often conscription of government rather than a true representation of society and tend towards a selective notion of professionals in AEC, contractors and property developers. This is in total exclusion of diversity groups and households' implicitly. It is the economic value and power that planned housing brings to its beneficiary that makes housing a perpetual need for all and a potential source for accumulating surplus value (Ungerson, Karu, 1980; Castells, 1997; Daramola, 2007; Pugh, 1980; Sharma, 1994).

Delineating stakeholders is difficult in a post-colonial nation-state. This is because the variability associated with stakeholders' alignments and coalitions, which emanates from beneficiary standpoint, dictates the outcomes of planned intentions rather than socio-economic profiling derived from income classification used as the basis for allocation of housing to stakeholders. Therefore, the inherent ideological proposition often arrived at by stakeholders as observed, is the need to strengthen coalitions; this occurs among households, actors/partners, and experts towards achieving an improved equitable access and distribution of housing. In reality, this is not the case as the institutionalized stakeholders' economic classification as a template for national housing instills inherent struggles that overburden the institutional and organizational framework in allocating access and distribution of housing. The use of allocation and the associated criterion in the national housing framework in Nigeria makes the framework subject to the whims of the allocator in this case institutions in collaboration with their cronies in social organizations that largely benefit from multiple home ownership of every housing programme rather than the real households in need. By using this same template for PPP, it negates the needed capitalist democratic process required to optimize inputs and derive benefits based on needs criterion. Since, it is in the nature of PPP that partners ascertain the basis for equity prior to initiating the partnership, by so achieving the Marxist approach yet infusing the needed morality as control to the success of such partnerships.

#### **3.4.3.3 Characteristics of partnerships**

It is evident from the exploratory analysis in this section that partnership is a sociological phenomenon with economic implications and can only occur in the context of an offer and acceptance by at least two entities (Matrimort, Pouyet, 2006; Angel, 2000). Like any common economic transaction, the essence of partnerships' is better understood and defined from an evaluation of its attributes (Shaokai, Yan, 2007) as follows;

- i). Partnerships are equity based coalitions and require social structures to exist.
- ii). They are agents of crystallization in that, they utilize users potentials to create effective demand at their levels, rather than above them and so proffers solutions that emanate from within the existing constraints among real and existential actors (including users and stakeholder).
- iii). Partnership is centrifugal in that, it harnesses actors' effective potential and focuses it towards some form of convergence for contextual use. By so, partnerships' instills convergence of objectives and goals among actors/partners.
- iv). Partnerships' are essential socially; for regulating surplus value accumulation at the expense of the vulnerable. Since partnerships in a social setting allows some reprieve and

reasonableness among actors' actions in pursuit of surplus value by injecting into enterprise a moral sense to profitability.

#### **3.4.3.4 Merits and Demerits of Partnerships**

i).Partnerships removes inequities in society by creating generalized platforms for the participation of the private sector; however, in the event of poor clarity in definition, it may lead to lopsided and sectarian distribution of resources and consequently compound the problems of inequity it intended to remove. Therefore, there is always the need for government to design the characteristics and quality attributes of the project once partnership become an option (Matrimort, Pouyet, 2006).

ii).Partnerships utilizes the potential participation of stakeholders to create solutions that are realistic to the level of effective demand. However, a poorly defined concept for partnerships leads to proliferation of solutions among stakeholders once such solutions are not well articulated and are not of a given standard across board (Okpala, 1978; Onibokun, 1978; Payne, 1999; Zrudlo, 1978; Akomolede, 1990; Aradeon, 2007).

iii).Partnerships enables a focused approach to solving the problem in question. Since the need for convergence and sequencing of stakeholders' anticipated goals and objectives are important to successful partnerships. However, the monotony that may emanate from such convergence could negatively affect the entire housing goal/objectives (Kemeny, Lowe, 1998; Keivani, Werna, 2001; Gidman, et. al, 1995).

iv).Partnerships enables government to regulate and intervene directly in the accumulation of surplus value by the private sector. However, since they can tailor their proposals for government approval before participation; there is the tendency to do just that, and get away with misrepresentation or lopsided views that would make government accept such convincing and well-presented yet lopsided proposals with clandestine intents. By so, a government discharges its partnership's obligation in direct conflict with the 'spirit' of the 'thrust' of the set out goal/objectives (Jones, Pisa, 2000).

v).Other merits and demerits include the spread of risk and its reduction; the corollary to this merit is the risk-averse attitude of government and over-monetization of private partners risk to the detriment of the housing scheme. More so, the merit brought to bear by the private sector of wide range of skills maybe on corporate brochures and not in the realities of implementation. Issues of Cost that is associated with procurement of skills (and the nature of AEC professionals, which is largely freelance) is frequently promised; but the private partner would rather opt for optimal and efficient use of professional service on contract basis to the detriment of the partnership and project delivery. In addition, the merit associated with claims of private partners capacity to contribute quality and quantity after the standards of global best

practice is often vague and never tied to any assessment template in reality. Since new approach by the private sector is often never sustainable in design and the elements of the housing product (Payne, 1999; Jones, Mittin, 1999). One of the risks associated with partnerships is a change in policy and political interference (Gidman, 1995; Batley, 1996).

### **3.5 Public-Private Partnership in relation to the enablement paradigm**

The enablement paradigm posits the creation of platforms that are essential for the participation of the private sector (Angel, 2000). The weakness here is that the private sector becomes the focus of the association. The notion that the activity of the public sector has long dominated the housing sector formally reflects this posture. Even then, there are documentary evidences to the fact that the private sector has had a history of marginalization and in most cases not included in the national framework as seen in the Nigerian situation (Awotona, 1987, 1990).

In Lagos, there is visible evidence that the stock of housing is by the private sector (formal and informal) and accounts for about 70% of current housing stock (FOS, 2004). Therefore, the relevance and participation of the private sector is necessary in the provision of housing for the city of Lagos. Since this sets the stage for massive organizational arrangement and coalitions among stakeholders that would negatively overwhelm government policies (if the private sector is ignored) no matter how well intentioned. The need to clarify the identity of the private sector in this regard is essential in two dimensions; the ‘who’ of the private sector and the ‘what’ that makes for such qualification? This is often done in relation to funding mainly and a little of technical pre-qualification criteria (Shaokai, Yan, 2007). This explains the nature of design copying of third world countries in its implementation of WB housing policies tied to funding provision (Rapoport, 1983; Pugh, 1994). Whereby, there is a departure by the private sector from the spirit of the goal/objectives of the public sector housing program. The resultant effect of such departure is a divergence in pursuit and outcomes of planned actions. Since the private sector can take advantage of the weakness of the public sector on as many fronts as possible through direct interpretation of omnibus spatial concepts that are market driven in service of lifestyle appetites of households qualified to benefit on cash payment basis (Aradeon, 1980).

One way to reduce the private sectors’ tendency in this manner is to infuse an index of social responsibility to the parameters of PPP for any given ‘setting’ of housing. Other parameters that may also be necessary depending on the complexity of the project may be environment issues and by extension a critical definition of the project/housing settings; this maybe based

on the need to instill newer doctrines of energy conservation/efficiency, and utilization of the process function for wealth creation (Prins, 1994).

Currently in the housing debate, such considerations and ideas are alien to the adaptations of the enablement paradigm in relation to PPP and it is in this direction that this study intends to make its contributions.

### **3.5.1 Housing Delivery Systems (HDS)**

This research as previously stated concentrated on housing the less vulnerable. Those who form the middle income of society with the capacity to translate aspiration into effective demand but are constrained to achieve this objective. Prins (1994), definition offered a more comprehensive approach on this subject as defined in section-1.

Generally, Turner (1972) had reflected similar opinion earlier when he asserted that HDS depends on several organized and institutional services; and this is with variability in the number and complexity of the context of the particular housing.

These two definitions expose the complexity of the housing problem. Three factorial variables relevant to HDS identified in the open literature are:

- i). the policy objectives; this is in relation to, affordability, viability, accessibility, availability, and adequacy (UNCHS, 2002).
- ii)-the process function; in relation to project initiation, land provision, planning and design, financing, authorization, infrastructure provision, building construction, access to occupancy, management and maintenance (Prins, 1994).
- iii)-the settings; this is in relation to the housing activity and environment. This is in specific terms of culture and society and in relation to the quality of housing environment (Rapoport, 2001).

Central to all three is the need to dismantle the operational context: For example, whether the delivery system is public sector initiated/driven (and or private sector) there are generative tendencies that would inform the thrust of the preferred delivery system utilized to achieve the goals and objectives. These tendencies would emanate from the settings of the process function as well as the settings of activities and the housing environment in relation to stakeholders. In cases where there are no clear-cut definitive parameters for the delivery system in force, then it becomes a product of coalitions and subtle informal agreements between stakeholders and competing resources in settings, which manifests as constraints (Angel, 2000). This outcome

precipitates from time-to-time the housing value of any society. This is in tandem with the notion that housing values within a society influences the housing goals/objectives of individuals and groups in co-existence, Thorns (1977). Thorns (ibid), identified two constraints in the achievement of these goals/objectives;

- the societal level of constraint (in terms of economic structures, public policy) and
- households' level of constraints, in terms of income, capital accumulation, effective demand.

In most societies, the housing values, constraints, submarkets, and housing career (choice of location and movement/mobility) informs the choice of HDS.

### **3.5.2 Public Private Partnership (PPP)**

Global strategy for shelter to the year 2000(UNCHS,1992), and enabling markets to work (World Bank,1993), are the formative documents which instituted the enabling approach paradigm. This was by considering partnerships to be an active and deliberate process whereby agents work together in an interdependent fashion toward a common agenda or goal. The main objective of this approach was to improve efficiency of the housing sector by the public sector concentrating on eliminating constraints on both supply and demand of housing (Angel, 2000). Pugh (1994) describes partnership arrangements as the joining of government policy makers, government agencies, community based organizations, non-government organizations, private builder and/or householders; and that, the success of the enablement approach is dependent on the success of partnerships. This all-inclusive stakeholders' delineation fragments identity in reality. By which, the use of 'selectivism' informs aggregation of stakeholders interests by classifying settings (of activities, design and environments) in a bid to initiate the process of partnership. For instance, a community-based organization (CBO) could refer to the social arm of a corporate entity established to service the corporations' social responsibility, in order to laud the positive impact of enterprise. To consider and compare such organization in quality, strength alongside a market-driven housing of property developers or a needs-driven partnership of a group of traders is misleading and counterproductive to the intent of the partnership paradigm. The reality of partnerships in housing is such that it is an all-comers affair. Once the feasibility of partnership-based investment capacity and the criteria to achieve provision of affordable meets the theoretical demands of public sector policy document then, access to tenure and other supportive rights are granted to private enterprise. Even where these two criteria remain poorly delineated in relation to the stakeholders' delineation in reality.

More so, PPP requires massive reforms in the legal, financial, and regulatory frameworks to create a positive ambience for utilization of public and private resources. Since the variability

of arrangement possibility available to PPP is yet untapped. These problems would abound until necessary bottlenecks that are visible constraints to interpreting and implementing PPP are eliminated. Unfortunately, literature specific to PPP in housing for developing countries is very sparse as it is yet to gain footing in real terms of applicability (Sengumpta, 2006). It has been observed that the inability of developing nation- states' to create institutional frameworks for housing markets due to its for-profit driven nature, the ability to make use of newer financial and private sector arrangements and the effect of illiteracy and poverty on the wider participant in housing accounts for low patronage of this approach to housing delivery. PPP requires the intensive use of societies' social capital that is applicable to housing-settings to achieve housing goals/objectives.

Various PPP typologies have emerged in the recent past that have been utilized by governments the world over to achieve their project delivery objectives (Levinson, et.al, 2006; Matrimort, Pouyet, 2006). They include (but are not limited) to the following: Build-Own-Operate(BOO), Build-Operate-Transfer (BOT), Buy-Build-Operate (BBO), Design-Build-Operate (DBO), Build-Develop-Operate (BDO), Build-Lease-Transfer (BLT), Build-Operate-Own-Subsidize-Transfer (BOOST) and Rehabilitate-Operate-Leaseback (ROL). In Nigeria two independent institutions, the Bureau for Public enterprises (BPE) and the Concession Regulatory Commission (CRC) established by the regulatory Concession act of 2005 is the legislative backbone to BOT essentially.

So far, in Nigeria, the concession of housing production to the private sector using the PPP model is recognized; but its inclusion within this framework is still ambiguous. Essentially, it remains under the control of the Ministry of Housing at the Federal level and the state level independently due to the land tenure clauses in the Land-Use Decree of 1978, which actually vested land allocation on the State Governors. There are several overriding, crisscross, and counterproductive legislation at various tiers of governance trying to solve the same problem of housing delivery for the middle and lower income groups.

### **3.5.3 Interrelationship between HDS and PPP**

How is housing delivery system (HDS) in relation to public private partnership (PPP)? Since, PPP is a paradigm shift of the enablement approach to understand this relationship, Prins (1994) definition of HDS gives credence to the conceptual development; firstly, the housing delivery system is a 'social configuration' and secondly, it is a 'relationship' based process at two levels; of 'production/distribution' and of 'function'. Since the relationship is not in a vacuum, it needs 'settings' as posited by Rapoport (2001), to function specifically. Then, it

brings to question a critical definition of its 'setting' at both ends of the 'production and distribution' process. There is a setting at the project initiation level; there is yet another setting at the production level and a third setting at the distribution level. An erroneous assumption is that the 'setting' is a fixed in time-space, which eliminates the dynamic transitions of the above listed phases. The elements of HDS identified as the determinants and hence the variables are dynamic in relation to the three phases of initiation, production, and distribution of the housing product. This supports the systems argument of Bertalanffy (in Bello, 1985), about the behavior of operating elements of systems. The outcome is usually not restricted to the reflection of a single element of the system but these integral parts at their levels tend to be relevant as well.

The practice over the years is that, housing experts (such as academics, developers, building material manufacturers and marketers, bankers, politicians, and built environment professionals (as delineated elsewhere by this study) theoretically and politically formulate the production end of the housing setting. The emerging documentation is available to the implementation level within the production subsystem, of actors/partners in relation to social focus groups that are in need of housing. These actors/partners in turn interpret and engage the services of AEC professionals, contractors, and artisans' who finally are at the end of the process of housing production. This study observes that at this end, goals/objectives are never as intended by the initiators of the project (housing experts) and actions herein are usually remote from such sensibilities of the initiators. Aradeon (1980) discussed the outcome of this phenomenon in relation to conflicts in design intentions and realities of spatial use (and discussed extensively elsewhere in this research).

The dilemma of an HDS is in the third phase called distribution of housing. In most cases, the criterion for distribution is not clear and the vehicle for distribution is through a public-based 'social focus group' of implementers. The problem associated with preference of beneficiaries does not represent the clear-cut criteria set out as goals/objectives for the development of the housing project. Despite the distribution technique adopted by stakeholders, the housing product comes under the attack of the settings' market forces of demand and supply directly or indirectly. In some cases in Nigeria, and Lagos in particular government have had to resort to the use of lottery approach to distribute housing among similar social focus groups (or a combination of one or more) due to a lack of alternative equitable approach to housing distribution (Aradeon, 1978).

It is therefore evident that, housing delivery systems (HDS) deals with initiation, production, and distribution of housing as its core activity in any setting to which the partnership



‘relations’ occurs during these activities. Simply put, HDS deals with the relationship between ‘activities’ in the housing process by choice and convenience in real terms, and PPP deals with the relationship between ‘actors’ engaged directly or remotely in the housing process. The variableness of HDS is therefore, subject to the determinate consequence of coalitions and standards in a setting among actors/partners. It is from the duality of the theoretical concept of HDS that this research focused upon towards redefining the question of adequate housing delivery.

#### **3.5.4 Redefining the question of Adequate Housing Delivery (AHD)**

Measuring the efficiency of the housing delivery system and creating standards to meet need/requirements of objectives are central to the question of adequacy. There are human existential and non-quantifiable functions which seemingly influence the sense of adequacy such as; security, stimulus/opportunity, and identity (Turner, 1972; Mabogunje, 1978; Rapoport, 2001 Gyuse, 1984). Therefore, adequate housing delivery could be a measure/acceptable standard of any of the following groups of attributes:

Group-1, the housing unit- in terms of accommodation type, space size, household etc

Group-2, the housing setting-in terms of the housing environment, quality of housing, facilities provided, management etc.

Group-3, the produced housing- in terms of quantity benchmarked against effective demand/supply

Group-4, the housing process- in terms of overall efficiency of the delivery system contextual to institutional, organizational settings as well as acceptability by the end users (both of product and the process; such as accessibility, acceptability, location etc).

Therefore, since standards are of two types as earlier defined as official and cultural standards: the levels of acceptability by actors (partners, experts, and household) shall form the basis for itemizing the components of these standards. This would be the thrust for evaluating adequate housing delivery. Upon this base conception, of groups of attributes, is the redefinition of the enabling paradigm for applicability. It is within the overall conception of enablement that all four groups of attributes require evaluation for adequacy within delivery systems that co-exist in partnerships.

#### **3.5.5 Institutional/Organizational arrangements and Housing Delivery Systems**

Housing delivery systems as earlier defined requires the input of resources and they are made available through what Prins (1994) calls the ‘process function’, namely; initiation of a project, planning and design, acquisition of land, financing, authorization, construction of

building, provision of infrastructure, transfer of units, access to occupancy, maintenance and management. To fulfill these functions, roles are defined within the social structure of the housing environment and development process (Rapoport, 2001). How then do these functions and roles determine the arrangement among partners in the housing delivery system?

Firstly, development of functions and roles is by coalitions among stakeholders. The need for control informs stakeholders' decisions into formulating relevant partnerships. Whereby, for actors/partners to act perceived limits must exist to which they can act within the context or settings that they find themselves. The setting in terms of housing environments is the cocoon that bears or succors the linkages to limited resources. Since resources are scarce, there is the tendency that partners would form coalitions among themselves to acquire resources and maintain levels of control and power to achieve their goals. Through these formations, the social focus groups become instrumental in shaping the type and nature of partnerships that emanate from any given setting. Therefore, an individual or group that perceives their 'function/role' as highly influential in a setting and can negotiate through the existing obstacles and conflicting interests is likely to sway the social arrangements that would emanate from that setting (Ying, 1997; Prins, 1994).

Secondly, the challenge for stakeholders' functions and roles is that they cannot occur in a vacuum. Prins (1994) identified three distinguishing domains namely:

- The subsistence domain, whereby housing delivery functions is achieved for individual or collective benefit.
- The commercial domain is where housing delivery functions towards housing provision is for profit reasons.
- The public domain which is geared towards moderate cost housing provision with political undertone/legitimacy goals and its achieved through institutionalized groups, such as local, state, and national governments as well as the international organizations (Ying, 1997).

Within the dynamic phases of the housing process (of initiation, production and distribution; succinct to production, distribution and consumption), stakeholders-needs' requires clarity of process and purpose in relation to the domain and implicit to the HDS thrust (or overriding goal/objectives of the specific housing programme).

From the above literature, the institutional concept of housing in relation to the social structure settings begins to emerge. The institution that comprises local, regional, and national arrangements establishes a framework for control that caters for legislation, financing, and the

overall guiding concept, which encapsulates its 'public' based approach as a caretaker of the housing delivery systems for stability, equity, and resource optimization. While, the implication of the market economy, which is liberal, democratic and capitalist, is the 'private' based approach and this is about profit making. In an attempt not to create a housing thrust which will enable strong coalitions in form of partnerships to accumulate surplus value (profit) to the detriment of the 'good of all' in managing scarce resources, it becomes necessary that organizations become responsive to the institutions. This would not happen on its own accord it would require government based initiatives in form of actually structures that are supportive to this course.

The conceptual development of this study is in relation to stakeholders' delineation, institutional, organizational arrangements, and the existing power relations, which correlate with socio-cultural coalitions among actors/partners for initiation of PPP. However, the overall frame work of the social arrangements and their constraints are derived from firstly, the economics of coalitions defined by the institutions'. This in itself is the basis of governance. Therefore, social arrangements take their origins from the nature of governance; politics, religion and socio-cultural and economic factors. Such interrelatedness redefines the limitations to HDS imposed by institutional and organizational arrangements among actors/partners.

In Nigeria, the institutional arrangements revolve around the federal government whose National Housing policy have undergone various reforms; the latest been the National Housing and Urban Policy, 2002. There are three key features of this policy namely:

- The first feature is the institutional reforms in relation to financing and restructuring of the apex mortgage bank (FMBN). This is to improve financing in three phases of the housing process (production, distribution, and consumption). The strategy is to open two concessionary windows. One of which is the transformation of NHF into a Trust Fund with board of directors and inclusion of workers representatives to improve accountability and good corporate governance. The second window is the introduction of securitized mortgages into mortgage-backed securities for sale to institutional investors (such as insurance companies, pension fund managers, banks, securities companies) to improve mortgage financing for housing delivery.
- Another feature of the institutional reforms in the establishment of the Federal Ministry Housing and Urban Development; by way of excising it from the Federal Ministry of Works and Housing. The intent was to increase the supervisory role of government on housing and provide a more focused interest (Mabogunje, 2007).

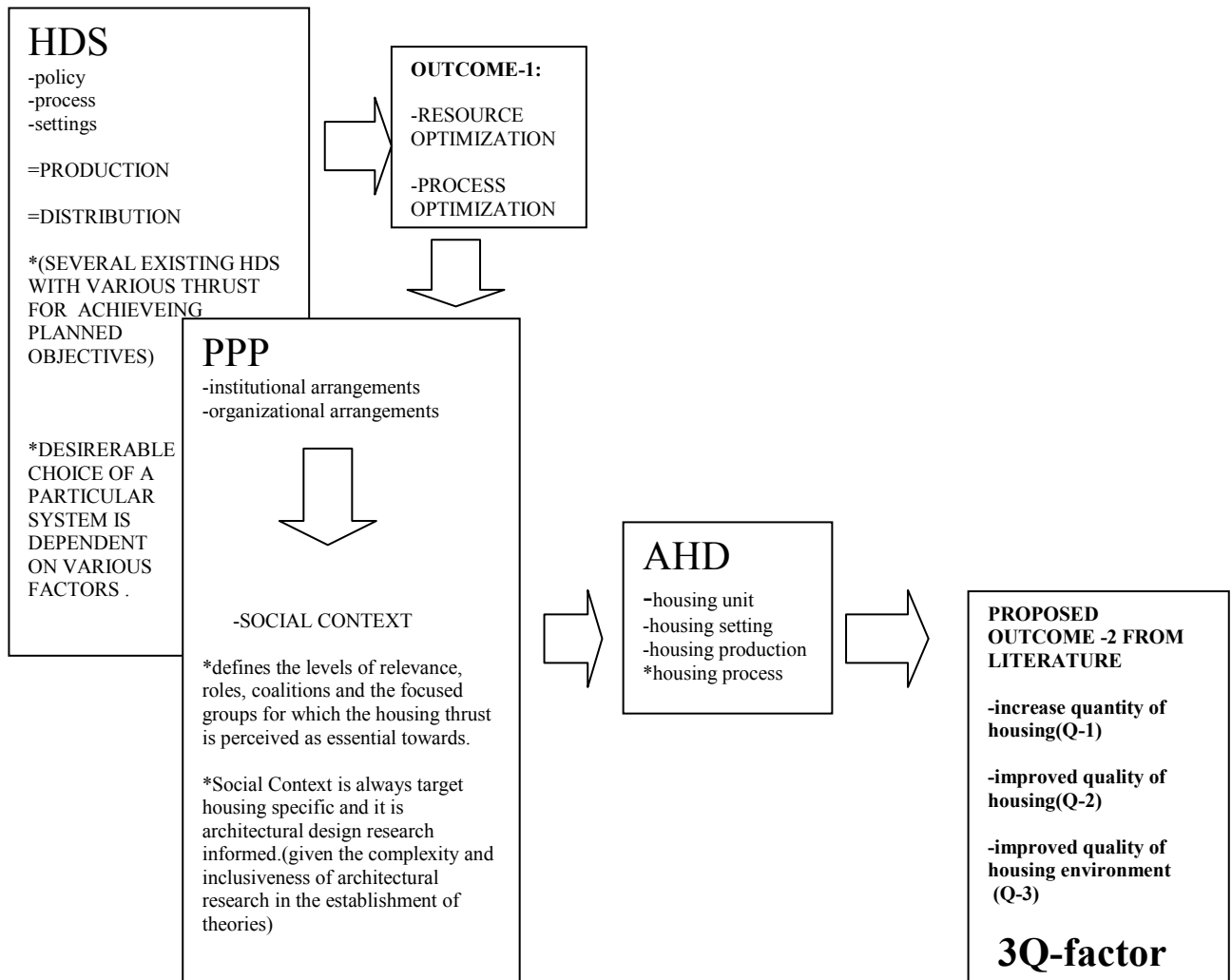
From the foregoing, it is evident that government sees a need for an inclusionary approach between organizations and the institutions that are arms of governments towards improving the housing delivery system. Since previous national approaches have failed to recognize that individuals, groups, and coalitions are essential to an efficient housing delivery system (Awotono, 1990). This led to the mobilization and organization of the private sector operators for the first time in the history of the country. By so, giving credence to the need for private sector recognition and broadening the inclusiveness of actors/partners considered as stakeholders. Three sets of actors/partners consulted in the new housing policy initiative were the Mortgage Bankers Association of Nigeria (MBAN) and Real Estate Developers Association of Nigeria (REDAN). The third was a strategic consultation with professionals in the built environment (Mabogunje, 2007). The professional's of the AEC industry consulted represented housing experts as observed by this research and their role is both vague and subject to the whims of strategic policy drivers (HDE) selected by government. However, it became evident in Nigeria's' housing policy reforms, that stakeholders' delineation succint to an elaborate inclusionary approach became important as different from policies of previous years.

The delineation of three sets of actors as stakeholders to the reforms by the national policy framework is inaccurate. It is essential to note that, the socio-cultural realities and interplay between religion, culture, and western political governance did not feature in the delineation of stakeholders. By categorizing sets of actors in terms of financiers, developers, and AEC professionals as the core social focus groups the national policy framework eliminated every other interest associated with the realities of the organizational structure of society. This negates the fundamental tenets of the enabling approach. Such interpretation of global theoretical frameworks inhibits the achievement of housing objectives in reality. Invariably, this omission neglected the perceived and erroneous basis for omnibus spatial concepts of housing and the relevant arrangements among stakeholders' realities, which emanates from HDS.

Therefore, this study uses figure 3.7 to demonstrate the basis for the conceptual development adopted herein. The complexity of architectural research as earlier described is an all-inclusive knowledge base. Where this process is undermined it is often assumed that social context is sociology or economics, politics or otherwise. The outcomes are often misleading since they rely solely on assumed design typologies as a prescription for their solutions. However, this research captures this all-inclusive nature of knowledge base for design determination in HDS;

and that it is relevant to a comprehensive approach for housing delivery systems with the intent of achieving the 3-Q factor as outcomes.

By conceptualizing HDS in terms of redefining inputs (of stakeholders, settings, and activities) called the universal objectives of housing, AHD becomes measurable. The measurements of PPP a subset of HDS is the result of optimization of resources and process which is indeed the outcome of AHD, called the 3-Q factor. Hence, the efficiency of an HDS is succinct to its determinants, defined by AHD.



**Figure 3.7** Project lifecycle-HDS Conceptual framework (Author)

**Note:** based on the Summary of the literature reviewed, PPP is a subset of HDS and AHD conceptualized in three ways, called the 3-Q factor of adequacy in housing. A measurement of the 3Q factor should inform the viability of any HDS or its subset PPP (in this case of study).

## CHAPTER FOUR

### HISTORICAL DEVELOPMENTS

#### 4.1 Introduction

The historical developments in urban housing in Nigeria were relevant to capture a more country specific peculiarities away from the global trend. Three levels of discussion initiated by this research are the global, country and the city specific HDS. At the national level, it was an examination of the historic antecedents and the supportive nature of the global influence postulated earlier in chapter three. By tracing the antecedents of the population of study through the country-specific historic epochs, this research captured, analyzed, and answered the probing questions it set forth.

#### 4.2 Urban Housing Problems in Nigeria

In order to understand the historic developments this research utilizes the problems of urban housing in Nigeria. These urban housing problems include but are not limited to; urbanization issues and poor data and methods of estimating, provision of target housing, lifestyle issues, social arrangements among actors/partners and households, and planning-design issues. Over the years, it is evident that policy and data have formed the basis for driving the housing delivery systems in Nigeria (Aradeon, 1983; Gyuse, 1984). These problems are discussed below.

##### 4.2.1 Urbanization/Data

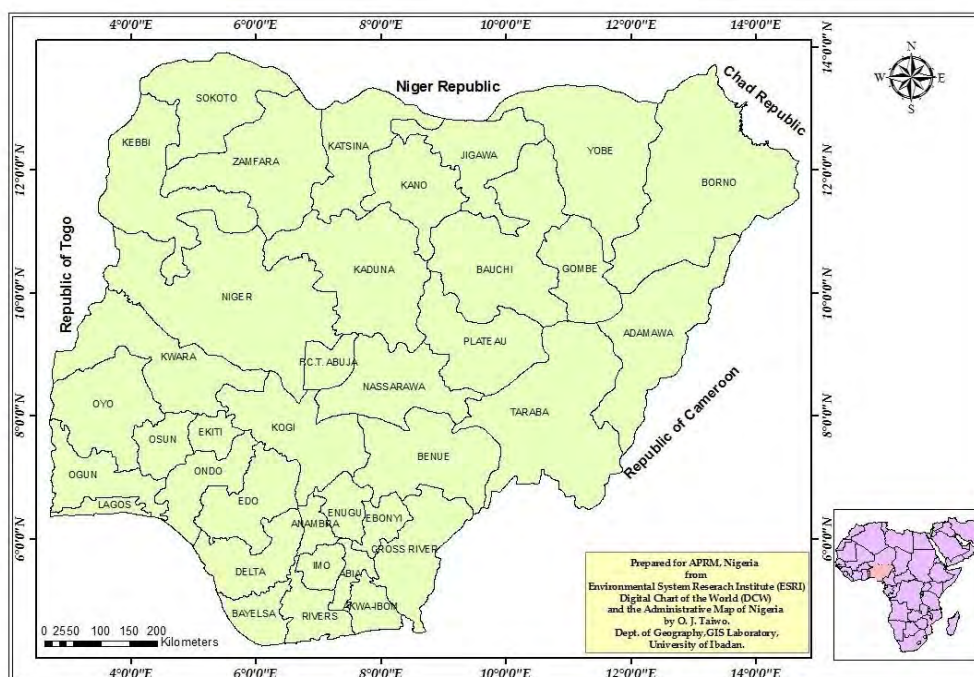
There is a divide in the Nigerian context as to the criteria for “urbaneness”. Gyuse (1984:3) stated “...no single universally acceptable definition of Nigerian urban centers has been found”. This may be attributed to the political undertone such definition would have in defining criteria’s for policy formulation which in turn would be the basis for distribution of national wealth (often referred to as resource control, largely from crude oil export). Even globally, the origins and measurements of urbanization remains debatable (Gyuse,1984).

Mabogunje (2002) had identified the origins of this problem when he cited colonial classification of towns in terms of the existence of amenities like pipe borne water, electricity for a town to qualify as a first-class town or a second-class town. More so, Weber (1971 in Gyuse, 1984) had theoretically utilized the same principle in classifying the extent of urbaneness’ in terms of utilization of western products such as television, radio to distinguish between rural and urban Africa. Such inept classification often imposes a variety of restriction on government to meet the needs and aspiration of the public as they clearly refuse to accept

productivity and existentialist approach to life contextually. This is similar to the associated problems of executing a credible national census until date in Nigeria (Amuwo, 2009; Onibokun, 1986).

In the recent past, the Presidential commission (headed by Professor Mabogunje, 2005) set up to review the framework for urbanization came up with a white paper recommending Lagos a mega-city. The framework and limits of what informs this and how they intend to go about the justification and criteria used remain unclear. Population alone remains the major and perceived criteria, for naming Lagos a mega-city. The rate of urban sprawl is alarming, as the city managers have literally lost touch with physical development control, which has recently influenced the Lagos state government to propose a new physical development control/enforcement ministry as separate from the existing physical planning and urban development ministry to tackle the various issues that plagues the city.

It is clear that the meaning of the 'urban' is tied to perceptions of elements of westernization population and the function of the setting in political circles. Essentially these factors are subject to manipulation in an attempt to achieve political objectives (Gyuse, 1984, Okpala 1984, Amuwo, 2009). Given Nigeria's geo-political expanse and diversity(see figure 4.1),with an estimated population of 150million in thirty-eight states of the federation and the Federal Capital Territory, Abuja, it is clear that the housing needs, effective demand, supply and stock would require intricate appraisal to achieve any efficient delivery systems.

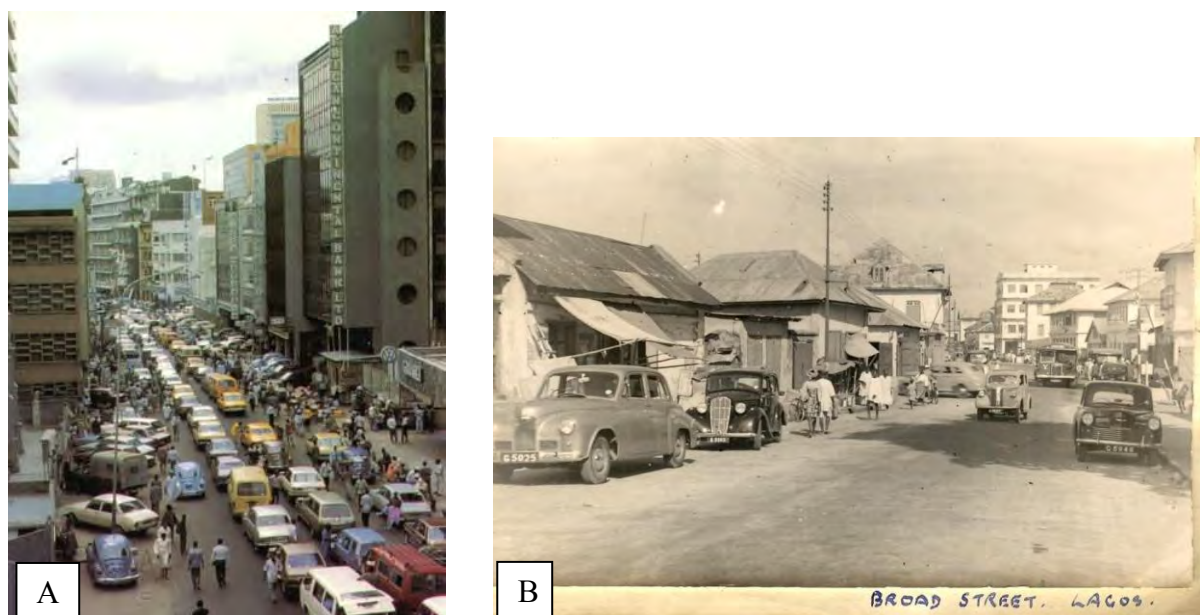


**Figure 4.1** Political Map Of Nigeria

Source:Dept of Geography,University of Ibadan;2006

The Federal Ministry of Information (2005:3) document establishes the FGN intent for the use of PPP in the housing sector as ...‘to *promote housing delivery Nationwide*’. In a signed memorandum of understanding between FGN and twenty-one investors (housing development actors/partners) through FMHUD, only nineteen states were represented out of thirty-eight and all had head offices in Lagos. This process of selection of actors/partners is flawed. Population was the basis for allocation of resources in relation to the national PPP framework. The argument in this study is that population is never in isolation; it is always in relation to social arrangements on matters of housing in Nigeria (Aradeon,1978).

Therefore, with population on the forefront HDS requires an examination of the criteria for determining housing needs against an urban backdrop. In the absence of this framework the criteria used for data extraction, manipulation, and utilization for national planning is obviously misleading. That the urban and the attendant data is largely responsible for the direction of housing delivery with regards to the national development policy cannot be over stated as there are clear indicators to this misnomer and the methods of estimating housing demand outside of specific socio-cultural context. For the purpose of this research, it is emerging therefore, that the nature of the population in terms of mobility, income, and sociality/association are relevant to delineate the urban. Figures 4.2 show the disparate growth of urban Lagos (Broad Street) within a space of seventy years. Yet, national data is in denial of such growth due to resource control and power politics reasons. Figure 4.2B shows a transition from subsistence-urban to transnational-megacity enterprise in figure 4.2A.



**Figure 4.2 (A and B) : Evolving urbanization**

**Notes:**Left,(A) Broad street, Lagos, 2010.Above Right(B), the same Broad street, colonial era (circa, 1930's;source [www.lagos.com](http://www.lagos.com)) .Increased commerce, and population in every sense of modernity still largely unguided in growth.



#### 4.2.2 Estimating housing/target policies

To estimate housing, the definition of the urban, (as the housing setting) stakeholders, and housing needs in reality are relevant. In this research development the urban implies, housing mobility, income, sociality/association, and other related elements discussed earlier in section 4.2.1. That Lagos is urban, or a mega city is that it is characterized by intense land use in terms of population (mobility, income sociality/association), it is also implicit of its demographic configuration as cosmopolitan, and it exhibits similar traits as would be compared to its contemporaries globally (use of technology, circulatory behaviours, evidence of intense commercial activities, etc).

The Nigerian urban centers like its contemporaries (globally), principally exist in an emerging market economy; while the political influences is characterized by the need to create real capitalist democracy (De Soto,2003). Consequently, globally accepted norms become the needed tools for experts to create real capitalist democracies. One of such tools is, target housing estimation. It is an ‘absolute’ empirical instrument and in direct violation of socio-cultural norms (that are more ‘sublime’ in nature). Gyuse (1984) identifies the quantitative and qualitative aspects of the housing problems in this regard as follows:

##### 4.2.2.1 Quantitative aspects of the housing problem

The dilemma faced by empirically estimating the quantitative aspects of the Nigerian housing problem is obvious from four national policy objectives and the questions asked. The inability of the objectives to address these pertinent questions makes national housing policies ambiguous in relation to solving real needs of stakeholder’s empirically.

*-To relieve overcrowding where it occurs* (what is the measure of overcrowding? and how can this be ascertained in Nigerian urban terms? This notion of overcrowding has no local legislative support, as it would be in conflict with social arrangements (Aradeon, 1978).

*-To provide housing for those who may not have* (what are the criteria for determining these people; seeing that government policy is geared towards the middle-income working class (a select social focus group) for target housing (Mabogunje, 2007).

*-To provide for natural population increases* (Since1958, population figures have been a political weapon with the British and the elite protégée they left behind after independence of

1960. An indeterminate population increase is a political weapon for national resource allocation and a persistent wrong planning document (Amuwo, 2009).

*-To provide opportunity for improved housing for those whose income can afford it. (The target social focus group called the middle-income cannot afford housing provided by government based on real cost of housing and government wages (Mabogunje, 2007). The cost ceiling for houses, not exceeding N5million, repayment, and assumed salary scale based on federal government workers grade level 10-12 remain unrealistic).*

Therefore, to quantify housing need and the economic realities it poses is a subject of debate to the Nigeria public and private sector; the method of estimating quantity, remains another quagmire for housing development experts as there seem to be inconsistencies in the approach as well as base data. Table 4.1 gives a general overview of quantitative methods for estimating housing in post-colonial Nigeria. Housing from policy standpoint in Nigeria is more of political oratory and a number game rather than a concerted effort to solving the housing problem.

The following is a list of Methods for quantitative estimating of urban housing need, demand, and supply in Nigeria.

**Table 4.1 List of Quantitative methods used in Nigeria for HDS**

| s/n | Quantitative Methods used(Post-colonial ;1960-date) | Description   | References       | Remarks  |
|-----|---|---|------------------|--|
| 1   | $N(t)=H(t)+R(t)$                                    | Where N is housing stock,H is housing requirement due to population increase (t)  | Agunbiade,1983   | Basis; deductions of population increase                     |
| 2   | $D=K(p/hs)$   | Where D is estimate ofhousing requirement, Population is (p), average household size is (hs) and (K) is number of households per single dwelling unit                                 | World Bank,1993  | Basis; UN measures 8-10 units of housing per 1000 population |
| 3   | $H=\sum (1/2P_M + 3/4P_{WD} + 10\%P_U)$             | Where H is number of housing units required, $P_M$ is half of sum of married persons, $P_{WD}$ is thre-quarters of widowed/divorced and $P_U$ is unmarried between 25-26years of age. | Sonnabend Method | Basis;overall population                                     |
| 4   | $A=P/H$   | Where A is average household size,P is population and H is the number of occupied dwellings   | In Gyuse, 1984   | Basis Average household size method(AHS)                     |
|     |   |   |                  |  |

Source:Author's compilation from Gyuse 1984.

These methods described above may be misleading since they are all data dependent for any level of accuracy to be achieved. Estimates of population, size of households remain very difficult due to national political problems associated with resource control, revenue

mobilization and distribution based on population as well as social ties among households (Gyuse, 1984; Onibokun, 1975; 1986, Aradeon, 1991; Amuwo, 2009).

The methodological approach described in chapter two provides the required evaluation technique for establishing baseline, and extrapolating the quantitative data for use by housing development actors/partners and experts alike. However, Gyuse(1984) upholds that there is no comprehensive officially accepted estimate of the size and distribution of existing housing stock and base data for proposed planned programmes; and where they are available they suffer from problems of inaccuracy. There was an estimated attempt by Doxiades Associates and Planning Research Company (PRC, Nig), who were consultants to the Federal government on housing in 1973 and 1980 respectively. This contribution with its flaws formed the basis for national policy implementation. Both consultants comprises of professionals and academics, which this research describes as housing development experts. Their solutions alone formed the basis for implementation and the outcome thirty years later is no different from the basic problems enumerated in this research. Doxiades Associates and Planning Research Company established criteria for a broad based ‘estimating’ by defining the ‘housing need’, the ‘dwelling type’ and the ‘household’ as follows:

- The ‘housing need’ was defined quantitatively; by the number of dwelling units that are of required standard (again ‘standard’ becomes an issue as earlier defined and it is discussed elsewhere in this study).
- The ‘dwelling type’ was defined as the portion of the building and services occupied by a household (this captured the socio-cultural implication in housing arrangements among Nigerian households for the first time).
- The ‘household’ was defined as a group of individuals acting together (as a nuclear family or a group of friends; this also captures the essence of national socio-cultural arrangements).

This was the first attempt by ‘housing experts’ to consider criteria’s for estimating which have bearings on the ‘dwelling type’ as well as the ‘household’ in terms of the nuclear and extended families and friends as it is likely to occur in reality (Gyuse,1984).

From the foregoing, estimating data and the base data from which housing estimating for planned programmes emanated as well as the accuracy of such base data is very necessary for any research irrespective of the approach paradigm (Awotono, 1988; Gyuse, 1984). While, this study cannot boast of perfection, this research approach took into cognizance the diversity and the complexity of the population of study within the urban context due to the prevailing

problems and issues highlighted as above and made these evident in the research variables it sort to address in the questionnaires. The aim was to establish the quality of households' variableness and the influences of the overall outcome of households' demand profile. The study took into cognizance the variability in dwelling arrangements by its delineation of stakeholders in terms of households, actors/partners and experts from which different questionnaires addressed pertinent housing related issues.

Hence, this research in its definition of household includes all who actively lives in a single dwelling unit, which is primarily the nuclear family, extended families and friends, as this truly is representative of the household in Nigeria and particularly in Lagos. Since housing in Lagos often serves an implicit national function, it is a concourse for the locals, and the Diasporas. Lagos is the main regional hub for commerce, and a national entry and exit point for most people who travel by air (or otherwise) internationally. This type of housing arrangement may be transient or permanent but based on the relationship with the household, as a family, extended family, or friend. It is common practice that such coalitions are basic to inherent tradition and it is a cultural lifestyle (Aradeon, 1978, 1991).

Therefore, in the estimating of housing stock quantity, three concepts were implicit by the PRC methodology: affordability, level of services and spatial variables. The PRC report by this moved the estimating of the quantitative aspects of housing forward in two significant ways, by assembling all available data and using a base data and by utilizing major physical and cultural constraints of urban housing development (Gyuse, 1984).

This research uses the quantitative data as an absolute figure to derive the socio-cultural realities of households, actors/partners, and experts within a given HDS.

#### **4.2.2.2 Qualitative aspect of the urban housing problem**

Gyuse (1984) identifies sanitation, infrastructural services, condition of housing stock, (as it pertains to structural soundness) location of housing, and occupancy (as it pertains to crowding). He identified five specific references to quality of the housing stock as it pertains to the data, scope, and gaps in the picture of the prevailing conditions of urban housing; that available literature depends on published government sources, and there is no new data after 1978. As at 2010, the baseline reference is still the unobtainable. More so, that there are basic discrepancies in housing estimating methodology; while available data sources serve purposes other than clarity in the research direction, and the information on housing conditions is generalized from a small sample of settlements by researchers. For instance, available data on

occupancy does not imply a notion of standards. Since, there are no generally accepted standards for housing in Nigeria (Mabogunje, 1978); it was only in 2007, that the National building Code was passed into law since 1960 independence. Although the document is a replica of the British standards, in many instances its definitions and exclusion of relevant socio-cultural aspects of housing is typical of the general approach to standards. Adequacy is often associated with number of rooms provided for households based on estimated family size. This excludes households' functions, which are transitory and spatial concepts that are omnibus in use. Gyuse (1984), points out that the number of persons per room is less meaningful especially in the Nigerian context, if measured against a backdrop of cultural responses to space and our use of outdoor spaces in conjunction with enclosed spaces. For instances, while western cultures consider corridors as circulation, the traditional owner-occupier in Lagos considers it as a domestic space. Aradeon (1978) observes that, such divergence in meaning reflects a generalization in the condition of urban housing in Nigeria.

There have been several calls on the need for a fresh survey of housing conditions in Nigeria. There was a comprehensive survey for Lagos state by the then Governor Tinubu administration (1999-2007). The results were only available in defense of Lagos population against Federal government data for resource distribution. The basis and methodology remain a secret, as it has become a weapon against political opponents and for justification of expenditure and resource allocation.

#### **4.3 Housing Environment/Lifestyle**

The definition of the urban is a major constraint since it forms the basis for demographic analysis and classification. The Nigerian Population Bureau (NPB, 2009; FOS, 2004) have defined the Urban in terms of population of 20,000 persons (minimum) in a town.

Webber (1971, in Gyuse, 1984: 4) insists that, *"Population nucleation is not an essential characteristic of urbanization. The flow of ideas, lifestyle, and other such qualities are of equal importance"*. In his analysis of the character of the urban population in Nigeria, Gyuse (1984:5) reveals that, *"going by Webber's definition of the urban; settlements of over 20,000 are essentially rural, whereas, smaller settlements such as Ajaokuta, in Kwara state and Ropp on the Jos plateau may on the basis of lifestyle be considered urban"*. The "lifestyle" parameter would remain a debate as the basis for urban, since the metamorphosis of the Nigerian town essentially, is in a continuum. Although Webber's definition is characteristically inclusive of relevant aspects of sociality, unfortunately the parameters used to benchmark "lifestyle" are socio-culturally inaccurate. If the use of electricity, cars, TV, fashion/style in

dressings and material housing typology depicts the urban; then current use of cell phone in hamlets, with solar panel as source of power by Webbers' definition makes such hamlets urban, even if their main economic stay is subsistence agriculture. It is obvious, that such origin of the thinking is western, biased, and ill defined.

This itemized evidence of modernity jettisons the notion of housing environment and lifestyle in socio-cultural terms. It was from this origins that early scholars approached housing delivery from a viewpoint of cherry picking western models which suited planned objectives of nationalistic format and became what Rapoport (1983: 251 ), referred to as third world designers tendency to, '*copy the hardware,... which leads to inappropriate results*'. Based on these premises, achieving planned objectives would be impossible through housing policy/project initiative.

Consequently, the issue of adequacy becomes uncertain in nature whether in terms of western or traditional adequacy, or syncretism (creative synthesis) which is a common denominator to the architecture of housing in terms of lifestyle and environment.

#### **4.4 Social Arrangements/Focus groups**

The provision of shelter and utilization of resources efficiently towards achieving housing objectives is ultimately the target of any housing initiative. Therefore, it is important to know the social arrangements among householders, and among housing development actors. It is a known fact from studies that all planned housing by the public sector never achieved their planned objectives, since outcomes have become very unpredictable partly due to social arrangements (Aradeon, 1978; Mabogunje, 1978; 2007; Koenisberger, 1970; Gyuse, 1984; Awotono, 1987).

In most homogeneous communities void of syncretism as a lifestyle (like in the west), the socio-political ideology emanates from a democratic belief system which is entrenched constitutionally and this is Christian in nature (Aradeon, 1983). The single-family house or single-family apartment reflects the one-man-one wife and three children model for living. Such conception of the house form was translated into colonial territories from where planning regimes have drawn their inspirations (Adeniyi, 1980). It is therefore worthy of note to identify the common social arrangements and focus groups among countries of Africa who have had an experience of colonialism with emphasis on British colonial rule as the case is in Nigeria. The immediate beneficiaries of this transition into syncretism are the working class (emerging

elite). They are the forerunners of the multifaceted-social focus groups the country is faced with in her class struggle (Amuwo, 2009; Melanie Paris, 1998)

**D4.1.** Cohen. A, (1981, in Melanie Paris,1998: 65) described the elite as *“a collectivity of persons who occupy commanding positions in some important sphere of social life, and who share a variety of interest arising from similarities of training, experience, public duties and way of life...They also seek to perpetuate their status and privileges by socializing and training their children to succeed them...and there is a dialectical relation between power and culture ,the one acting on the other.”*

The various movements and consequent evolution of social focus groups in Lagos is traceable to historic political antecedents (circa 1800). This was in relation to the colonialist and the returnee slaves from Cuba and Brazil; they were locally called *Aguda* or *Amaro*, meaning ‘those who have been away from home’ (in the Yoruba language of the western Nigeria where Lagos is situated) and their Sierra Leone returnee slaves counterparts called *Saro* (Vlach, 1984). Lagos, at this point in history comprised of four social groups: The *Aguda*’s, the *Saro*’s, the indigenes, and the Europeans (Paris, 1998). The impact of this social divide is reflected in the direct intervention of the British consul in securing land for farming and dwelling for the *Aguda*’s and the *Saro*’s from the King of Lagos (King Kosoko). Land acquisition by seizure and allocation to a preferred group actually is traceable to this early act of British intervention in social arrangements through institutionalization of land tenure. The motivation then was industrialization of Europe.

Pugh (1980) identified three stages of motivation in the housing evolution for most democratic societies/countries namely; needs and problems of industrialization, general social needs, and competitive interest of public and private initiatives which marked the development towards national comprehensiveness and coordination in housing policy. Given this trend, the paradigm shift over the years is not just a result of policy changes rather a strong sense of social response to every planned action. While in civil societies of Europe and the West the bureaucrats were the arbiters of justice, equity and distribution of national resources. In Africa, the coalition of a few indigenes who supported and benefited from colonial rule became the elite for whom syncretism became a lifestyle (Rapoport, 2001, Aradeon, 1991).

It is obvious that the elite syncretism (creative synthesis) in Nigeria was borne out of the need to meet the expectation and obligations of European colonial masters. However, as time went by, the elite developed an underlying need to be in touch with their locale and remain popular.

Therefore, an attempt to dispense with neo-democratic dictates of the colonial masters became a leadership quagmire. Since out of such neo-democratic dictates, they often find the comfort to wield their power but have continually failed to uphold the same powers in absolute terms as handed down to them by the colonialist (Baradat, 1997).

It is in the nature of housing that this transference of national power relations becomes a thing of concern especially in the production, distribution, and consumption of housing for which national might is utilized for any emerging economy as Nigeria; and where planned action is expected to bring about successful implementation.

This democratic transition is such that social relevance for the elite transcends the three tier of government power in the newly formed nationalistic entity, called 'the independent country'. As is the power divide so is, the demand on home ownership since housing is 'place specific'; so is the demand placed upon the elite to own homes at locations of power. Hence, multiple-home ownership (MHO) is not limited to surplus value accumulation; it is also about social relevance, political power, and partaking of the 'national cake'. Especially, where government might is brought to bear on the distribution and consumption of housing (Daramola, 2007).

The emergence of the nation-state marked a clear political delineation of power. This further heightened the class struggle and gave legitimacy to the issue of multiple-home-ownership (MHO). The tripartite arm of government simply became the fulcrum upon which the middle-income displayed their affluence by multiple-home-ownership. Otherwise, they may become less relevant in terms of affluence and influence among their socio-economic and traditional/cultural settings from which housing derives most of its socio-cultural attributes and behaviours. The remoteness of one's village of origin creates a greater need to satisfy the political nodes in relation to where perceived national influence exist. Therefore, the village (or hometown), the local government capital, the state capital, and more recently the political capital of the nation state (Abuja) as different from the national commercial hub (Lagos; whose relevance has been discussed earlier), became sources for delineating ones identity among social groups of the middle-income. Consequently, social configurations pre-determine the location of housing for households beyond the numeric data for estimating needs. Multiple-homeownership is not always associated with the derived economic need to accumulate surplus value alone. Rather a need for social relevance succinct to general housing needs plays a vital role in MHO. This is whereby, the average middle-income householder in Lagos strives to own a house in Lagos (as his primary place of abode), in addition to other houses wherever he hails from in the country before housing aspiration can be said to be met. Therefore, social



arrangements truncate housing objectives in realities of production, distribution, and consumption once national framework is the basis for determining housing needs.

This phenomenon takes its origins from the inability of the post-colonial governments to contain the power relations between the seats of power referred to as ‘capitals’ (local, state or national) which used to perform dual functions for commerce and politics. Since this strategy was used during the colonial era to marginalize tradition or to justify nationalism (Paris, 1998). Examples are the movement of colonial political power from Oyo town to Ibadan in Oyo state, formerly western region during the colonial era and a similar movement from Zungeru to Kaduna in the north; both were due to conflicting power relations between tradition and colonialism. Small auspicious hamlets like Kaduna and Ibadan suddenly became ‘urban’ due to policy shifts. A similar movement in post-colonial Nigeria is the movement of the federal capital from Lagos to Abuja; precipitated after a failed military coup in 1985.

The essence of these citations here is that the identity of a capital; local, state or federal comes with massive physical development and consequently housing delivery for the new sites of government offices and support workforce as well as the commerce of governance which would automatically ensue. Therefore, Public-private partnerships’ in housing delivery is a result of the political arrangements in the citation of governments’ administrative posts largely. In most cases, enablement in this term is consequent on governments’ policy directives alone and not necessarily the economics of market forces. More so, the size and scale of housing development is politically motivated. By so influencing the realities of spatial use in all ramifications in terms of the design typology, the size of spaces and the conveniences attached. These architectural attributes fulfill a political agenda rather than the need for housing, thereby negatively influencing the housing outcomes in real terms.

It is from this analysis that the need to formulate an approach for delineating key institutional arrangement as different from the organizational arrangements would begin to emerge as this is relevant to the urban question as well as the housing delivery objectives among partners. The institutions by this literature is representative of these groups; the indigenous (the classes of chiefs, kings and religious arbiters) and those of pre-colonial and post-colonial relevance (the army, police, government ministries etc). These roles frequently interchange in response by households. In most cases, for post-colonial operatives of government to have their way in their housing programmes, they would need to consult these indigenous institutions to give legitimacy and correct the intent and perceived wrong notions of the people. While in other scenarios, their role is organizational in nature. In Nigeria, institutional roles have latent

organizational influences through social focus groups within the institutions and the social divide from which governance is administered (Aradeon, 2005).

Similarly, the organizations of both the indigenes (market women, traders) and those of public functions (labour unions) with the recent non-government organizations and civil liberties movement and ethnic groups/regional groups have shown remarkable fits in their utilization of their coalition to withstand government based programmes in political affairs/issues (Amuwo, 2009). When social focus groups embrace, a government programme it makes for ease of implementation and housing is no different. There is an expanding coalition of social focus groups and this is no longer limited to a selected few among the middle-income. Such expanding profile would always reflect in the housing arrangements that are emerging; it becomes obvious in the nucleated estates that are emerging around the city.

The relevance of these social arrangements is such that it is from here that the government selectively draws an agenda to focus on a particular group in the best interest of its overall objectives. This often includes the dictates of donor agencies like the World Bank and their succinct demands, which may not be as obvious given the limited resources at their disposal. To assume that the theoretical framework for government policy, which emanates from the World Bank theories, is socially responsive in implementation for a region or sub-region against the above backdrop would be erroneous.

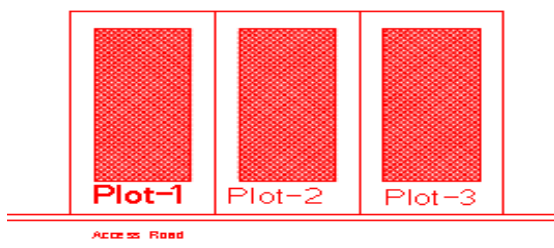
In this phase of competitive interest between private and public initiatives in housing there is definitely going to be the class struggle issues even within specific social focus groups. One of such dilemma was in the distribution of the housing of FESTAC 77 in Lagos. The public sector officials used the lottery system to distribute the housing although with the provision of mortgage for households and the sale price was subsidized (Aradeon, 1982). More recently, the games village in Abuja in 2007 was distributed in the same manner thirty years later (FMHUD, 2000).

It is obvious that the complexity of social arrangement and the need to meet the housing demands and objectives of social focus groups is still a major setback in the housing process. An attempt to delineate these groups in the light of the housing provided will be adopted, as this will give an indication to the various interests which tend to favour access to particular housing, by so further delineate the inherent arrangements, and define who they are by their choice of housing.

The theoretical framework of most housing process, production, distribution and consumption related issues are dictated by the arrangements among housing development actors/partners and households in terms of their organizational and institutional placement within overall national framework. This type of coalitions reflects the middle-income groups in this study; they are powerful enough to have their way in the housing process and by so turning their aspirations into effective demand. This research intends in its evaluation to take cognizance of these influences in the selection of its subjects for study among the middle-income group as stated.

#### 4.5 Planning/ Design intentions and cultural response

Similar to the above is the disparity between planning/design and cultural response or the realities of spatial use as surmised by Aradeon (1980). This influences the outcome of the housing specific issues in terms of spatial use and function, which is consequent to the evolution of the city. Although, it is based upon the need for housing provision, and the necessity for subsistence commercial activities: What is built is often based on the planning context of target-cost and housing typology, but the realities are often an adaptation from user needs and necessities. The target-cost is based on some economic indicator associated with specific social focus group while the housing typology is an offshoot of a western template for neo-liberal capitalist democracy as seen in the single-family house type placed on a single lot (plot) layout typology as shown in figure 4.3. This is a typical single-family land use concept and it is a manifestation of syncretism by nature.



**Figure 4.3** Typical Existing Land Use Concept Source: Aradeon(1981,Pp.25-41)

**Note:**Single Family House On One Plot Of 18m x 36m the shaded portion in red is the buildable area not exceeding 40% of the land;6m set back in front and 3m setback on the sides and rear.

The need to meet the housing demands of society based on the single-family house concept remains a western approach to housing provision and consequently the mechanism used to achieve this in the housing delivery systems would fundamentally be western in origins. Hunter (1981), pointed out that such housing delivery systems was alien to Africa and only

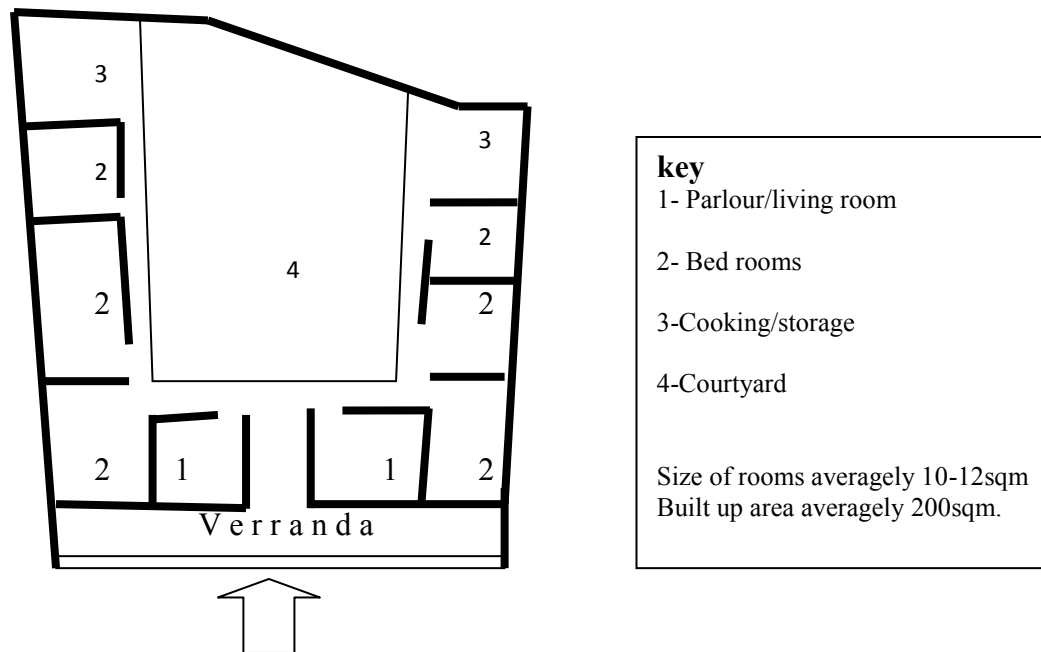
benefited industrial Europe who had a ready market to sell over 70% of the building materials needed to achieve such housing typology for local consumption.

In Africa, 'social welfare' is a burden among families and has remained so for centuries and hence the inability to establish strict capitalists democracy or socialist states (Baradat, 1997). This connection stems from the need for cultural identity often truncated by the hierarchy of governance in the nation-state, which comprises the three tier of governance, the local, state, and federal/national levels. This convergence of power within local context often creates imbalance in the interpretation of functions by indigenes. This translates into new values, meanings, and language. The physical development has been the most obvious aside from class struggle through political machinery and organizational coalitions. In the physical development, these manifestations exist at two levels, the planning level, and the design level.

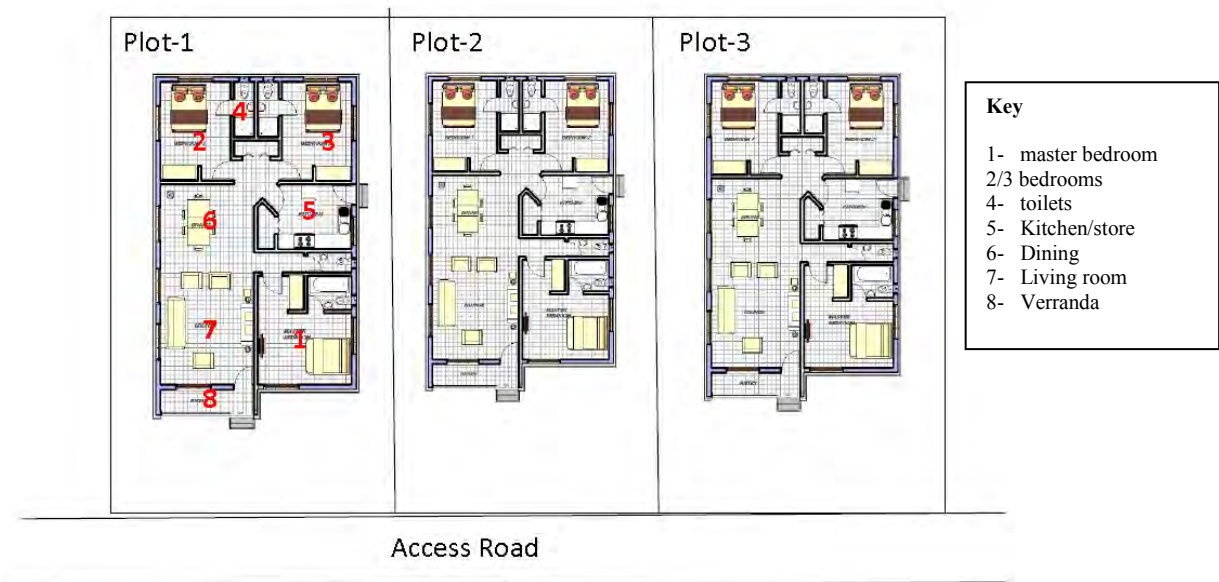
Aradeon (1980, 2005), had identified two planning typologies in this regard. They are the public/government layout and the private layout. The first is serviced with relevant infrastructure, road, electricity, water, drainage, etc. While the second does not get services or the services come later, sometimes up to ten years after households occupy the completed housing.

At the design level, two types of house form exist (Aradeon 1991). The courtyard (figure 4.4) and the single house form (figure, 4.5). The courtyard house form is an 'activity defined space' and the single house form is a 'synthesis of space defined activities'. These house forms show the use of space and the dynamics of group interaction; which indicates the manifestation of culture rather than the symbolism of the enveloping house form. The typical traditional house form as shown in figure 4.4 allows for growth of the nuclear family and expansion of the built form and by so limit integral housing demand by including the extended household. On the contrary, the western space defined activity house typology limits growth and increases housing demand and mobility among households that outgrow particular built form.

This expression is captured in the following statement: *'the spatial organization within the building types, bungalows, duplex, flats, villa etc. with its lot (plot) controlled setting does not produce the uniformity and similarity that typify similar neighbourhoods in western European and American landscape. Rather in the typical semiotic neighbourhood, especially those privately built and financed, the building heights and volumes vary, the meaning eclectic and eccentric but pragmatic and appropriate to user culture''* (Aradeon, 1991: 96).



**Figure 4.4** Typical Plan of Traditional Court-Yard Compound (Sources:Vaughan Richards, 1978), nts.



**Figure 4.5** Typical Single family four-bedroom bungalow house for middle income (Source:DNL Architects,2010)

The perception of the planning and design intentions remains non-homogenous among interacting social focus groups due to varying backgrounds in terms of affluence, levels of exposure to western culture and levels of experience. Aradeon (ibid) insist that... *“such borrowed cultural forms conspire to produce a visually chaotic neighbourhood of intense ,human activities. To a casual visitor and the neighbourhood lacks visual order, but within the*

*culture of the users, the underpinning human social relationship is ordered at several levels.*” Aradeon (1981), discusses the interplay of four factors on conflicts between design intentions and realities; land-use system, land-use design, variable factor of spatial use and physical control and these factors persist in Lagos till date.

#### **4.6 Evolution of the Housing Policy Periods**

**D.4.2** ‘Gyuse (1982:4) defined a policy as ‘...*a definite course of action adopted as expedient, or adopted after careful consideration of various alternatives*’. It is the definite ‘course’ of ‘action’ used by government over the years to deal with the housing issues that this part of the literature would review. Two sources of the evolution of governments’ definite course of action delineate the study of the housing development epochs in Nigeria. First and most popular is the benchmarking of epochs against the National Development Plans as it has occurred since independence and post civil war (Onobukun, 1975; Adeniyi, 1980).

- Colonial phase up to 1960(colonial housing policy)
- Limited government intervention 1960-1970(1<sup>st</sup> & 2<sup>nd</sup> national development plans)
- Massive government intervention 1974-1983(3<sup>rd</sup> & 4<sup>th</sup> national development plan)

The second and more recent is a macro-economic perspective by Oyediran (2003); which delineates the entire post-independence development period into five segments

- 1960-1965(independence to shortly after)
- 1966-1970(pre-civil war/civil war)
- 1971-1985(oil boom/down turn era)
- 1986-1996(SAP; Structural Adjustment Programme era)
- 1997-date ( post SAP era)

However, this research took into cognizance the historic conditions, the architectural typology along with the housing delivery systems over the periods of established development plans by the public sector, while considering the settings in terms of the socio-political and socio-economic conditions, which reflects the Lagos community under review. Citations elsewhere in this work shows that colonization is one of the tripartite histories of African cities and forms an essential benchmark to all suggested delineation of the historic conditions for most of her societies (Eleh, 1987; Aradeon, 1978; Mabogunje, 1977). Therefore, colonization was the fulcrum upon which this research evolved assessment of historic conditions in housing as well as its analysis of the housing epochs and strategies for housing delivery systems, given that its

impact has largely accounted for the syncretism in the current people defined lifestyles. These periods are as follows:

- Pre-colonial (before 1913): before amalgamation of the protectorates.
- Colonial (1914-1959): after amalgamation to shortly before independence.
- Post-colonial (1960-present day): after independence from British rule

The analysis of each epoch informed the prognosis into the housing delivery systems with the intent of capturing contributions of government policies/programmes and private sector participation and the instruments for achieving these contributions. That certain arrangements within (and between) stakeholders at both the institutional and organizational levels of interactions do exist was explored for content to ascertain to what extent have these arrangements engendered achievements of planned objectives. The following discussions highlights of the impact of syncretism and lifestyle as it relate to the evolving architectural space and form of housing within the epochs set forth herein.

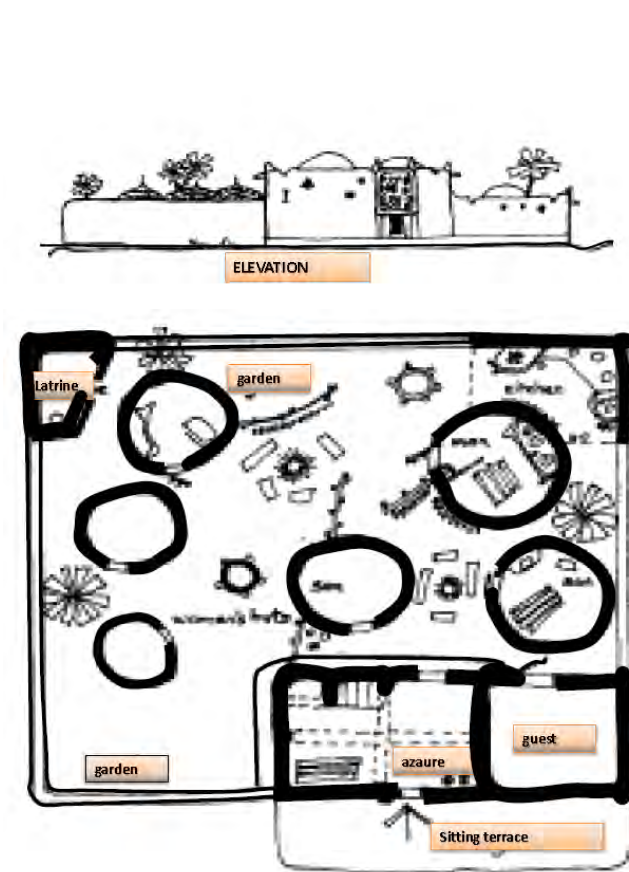
#### **4.6.1 Pre-colonial (before 1913)**

The Pre-colonial period is traditional in approach to housing without significant distortions by the Islamic influences, the European Christian influences as already highlighted in the general introduction. Emphasis is on influences that are African in origins. This is a period, which is theoretically extinct from the natural history of Africa. The research relied on the oral and dotted evidences of the relics of housing especially within the region later known as Nigeria.

Firstly, the word ‘traditional’ describes indigenous efforts in terms of the people’s lifestyle, the capacity and technology as well as their implicit economic, social, and artistic systems (Nwafor, 1979). This research will deviate from limiting itself to visible evidences and relics of this period alone, as this will allow itself to function as a tool of cultural subjugation and in all ways become prejudiced like most other researches (Huntar, 1981).

Secondly, the regional architectural housing form within Nigeria is distinct. The northern, eastern southern and western Nigeria exhibited architectural forms that were both responsive to their microclimate and their economic source of livelihood. Figure 4.6 shows a northern family housing. The flat roof is responsive to the microclimate, which is arid and the nucleated huts for wives and children and grain storage shows the agrarian source of livelihood.

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**Figure 4.6** Drawing showing indigenous Hausa Housing of northern Nigeria-single family is a man and his wives and children. source:Nwafor, 1979.



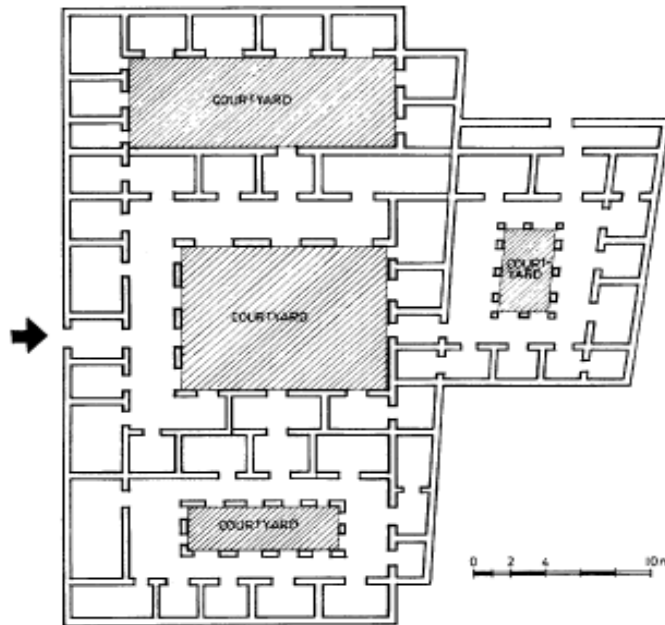
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**Figure 4.7** Drawing showing the indigenous Tiv housing of northern Nigeria,(middle-belt). source:Nwafor,1979.

Similarly, the figure 4.7 is a typical middle-belt housing of northern Nigeria. The courtyard concept is clearly defined as different from the compound in figure 4.6. Essentially the two concepts serve the same family-communal purpose for gathering and utility. The outdoor lifestyle is an integral part of the household and a common feature as already indicated in figure 4.4.

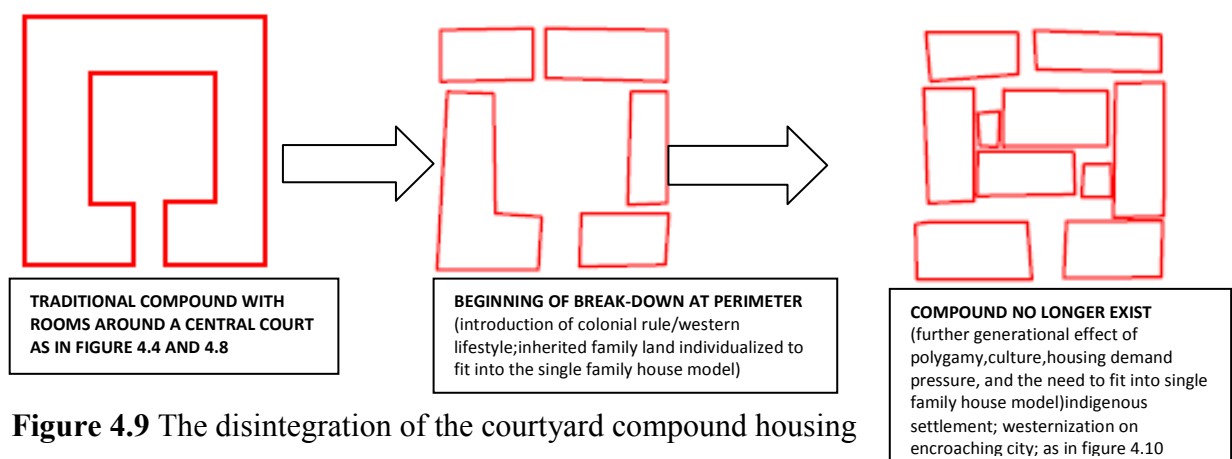
However, in western Nigeria and most parts of the southern Nigeria the architecture is definitive in spatial context with more activity defined spaces that are enclosed as in figure 4.4. The typical Yoruba tribe housing of western Nigeria is shown in figure 4.8. This is an elaborate housing of a household; comprising a man, his wives and children. In some cases adult children increase the defined spaces with their spouses. The word 'compound' describes the entire enclosure within which all activities are defined away from the street level. Four courtyards define the hierarchy of space from the entrance which is occupied by the most senior 'the father'. The left and right are the wives and children while the rear are adult children with their spouses; they form a formidable workforce to sustain the agrarian lifestyle.





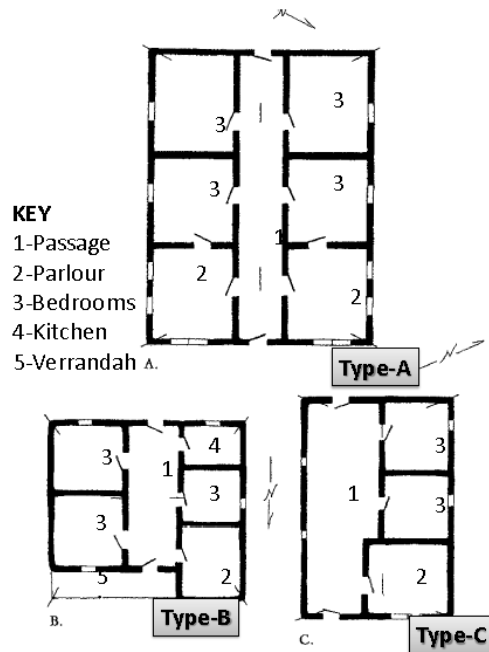
**Figure 4.8** Plan showing the polygamous-family (as against single family) court-yard pattern of indigenous Yoruba housing of western Nigeria, where Lagos is geographically located. Source: Nwafor, 1979.

To interpret this housing form the figures 4.4 which is the courtyard house and the single family western model is reviewed in its transition as shown in figure 4.9. Essentially, the courtyard house which is described as a family-compound began to disintegrate from the polygamous concept to the single-family western concept. In cities like Lagos, there was the transition of the functions of the single-family house into a single rooming apartment while the indigenous house was rented on a single room basis by the increasing workforce coming to the city who were not catered for by the emerging colonial housing policy. The result is a collapse of the traditional compound and a rational adaptation of the western styled housing in the form of rooming apartments for the middle-income and low-income households who were not catered for by the colonial government; figure 4.9 and 4.10 shows this transition.



**Figure 4.9** The disintegration of the courtyard compound housing

Notes: from the homogenous activity defined space into a non-homogenous neighbourhood of space defined activity housing. Source: Vaughan-Richards, Akinsemoyin (1976, pp8).



**Figure 4.10** Outcomes of the disintegration of the courtyard compound housing into rooming housing: A-symmetrical central hallway typology; B-asymmetrical central hallway typology and C-side hallway typology (source: John Vlach,1974)

However, the use of mud as the wall enclosure material is common to all these traditional housing typology in Nigeria. Therefore, the use of mud hut the thatch roof, circular, or rectilinear forms as have been previously described in the majority of literature are only evidences of cultural subjugation to the extent that they are used to describe the primitive nature of traditional African architecture as it is exemplified in housing style. By so, totally ignoring, the philosophy, ideology, and corresponding theoretical content as it exist in similar civilization elsewhere in the world at the same time.

Such perspective was presented by early writers like Banister Fletcher(1945, in Godwin,2002:65-72); when he dismissed as architecture, fifty centuries of what he called “*fragmentary evidences of the rude building attempts in an unknown past*” and launches into Egypt (as the basis for any form of architecture in Africa). Godwin (65-72) pointed out that;

*“there is no concession made to the fact that what might be termed “rude building attempts” or “lost prototypes” or even “pre-historic remains” have not disappeared in many countries like Nigeria, but are very much a significant part of our environment.”*

In the same vein, Godwin (65-72) asked, ... *who changed construction technology? When in the 18<sup>th</sup> century the palace of the Emir of Kano (the council chamber which is still intact) has the*

*largest span for a single room in mud and azara construction of 8.5mx7.25m.* These evidences of architectural theory and concepts from which physical developments emanated cannot be dismissed. Housing was an integral part of socio-cultural settings and economics of households and the evidences are dotted all over as relics.

The most significant change to construction in West Africa and particularly Nigeria was by Afro-Brazilians who returned in the 1830's to West Africa with the skills they learnt from the Portuguese with which they established an architectural style that originates from renaissance architecture as well as colonial-Europe (Godwin, 2002; Aradeon, 1978). Gradually, the courtyard house began to disintegrate in favour of the imposed European styled housing called the colonial style.

Hence, at the turn of the century, two types of architectural influence emerged; Brazilian and colonial styles as shown in figure 4.11. While the Brazilian buildings were Mediterranean, built on the street without forecourts, colonial buildings were suburban (Godwin, 2002).



LEFT: Afro-Brazilian House type(baroque)-A.W.Thomas on Odunfa Street,Lagos Island(Aradeon,1996)



RIGHT: Colonial residential house type-Ikoyi(Aradeon,1996)

**Figure 4.11** Left: Afro-Brazilian house; Right: Colonial house

Other accounts of European explorers whose diaries were destroyed for reasons best known and ignored by the emerging 20<sup>th</sup> century academics remains unthinkable for a world whose perspective to existence should be holistic and contextual. Such as those cited by Njoh (1999, in Tordoff,1984:54) reference was made to an early Dutch explorer (circa,1602) who described an African human settlement which is said to be located at the site of modern day Benin-city in Nigeria (figure 4.12). The explorers described the settlement candidly as follows:

*“The town seemeth to be great; when you enter into it, you go into a great broad street, not paved, which seems to be seven or eight times broader than Warmoes Street in Amsterdam; which goeth right out and never crooks...; it is thought that that street is a mile long [a Dutch mile, equal to about four English miles] besides the suburbs...when you are in the great street aforesaid, you see many great streets on the sides thereof, which also go right forth... The houses in this town stand in good order, one close and even with the other, as the houses in Holland stand... The King’s Court is very great, within it having many great four-square plains, which round about them have galleries, wherein there is always watch kept,”* (ibid).

This account certainly does not describe a ‘primitive housing setting’ since it was comparable with what was going on in other areas in the world such as Amsterdam.



**Figure 4.12** Benin city-Nigeria (circa,1600’s)source:www.blackpast.org

Based on this backdrop it would be important to note that the thrust of colonialism is entrenched in the pursuit of its agenda, no matter how compelling the improvement concepts may seem, it retained the, “we European” versus “you the indigenous African”. Therefore, it would be theoretically misleading not to postulate the reasons/objectives behind such new introductions of housing style urban planning style, and the need for colonialism at a frenzied pace. Njoh, (1999) highlights’ some of the tacit reasons as follows:

- \*Modernization of “backward” places and people;
- \*Promotion of colonial economic development objectives;
- \*Facilitation of social control;
- \*Promotion of racial residential segregation;

- \*Promotion of European culture and social values; and
- \*Testing of the workability of new planning theories.

However, the traditional settlements in all accounts have basically the same origins and patterns for housing; Three broad categorical features are essential for Africa prominently and they are, housing the Living, deity/gods and the dead (Hunter,1984). In the housing delivery systems for the living for which this research is focused there is a divide as to the class and function of the housing. An attempt to classify housing by function in relation to class is as follows:

- housing for the leadership (King, chiefs, princes; most times in hierarchy)
- housing for the upper echelon of the subjects (chiefs, businessmen, elders)
- housing for the general subjects (peasants, state workers, visitors and traders).

Under the housing form, the size is usually depended on the prowess of the family head; taking its root from a patriarchal social system (Hunter, 1984). The civilization of the economy and politics is expressed in the civic buildings and housing for the kings, where the architecture is celebrated alongside technological expertise and affluence in grand style. As seen in the Benin Kingdom, Kano, Oyo and Egypt.

In all of these, the family is the nucleus of the housing objective. This includes wives, aged parents, children, adopted children, slaves, and visitors. The size of housing is usually a product of one's affluence as well as communal position. It was never a product of income or a state decision (as to what you ought to have). This social trait has remained an acceptable aspect of housing in Nigeria and widely African.

The need to satisfy this drive is partly responsible for the corruption this region now experiences in its current dysfunctional state of trying to cope with tradition and westernization. Since, the community was a small enclave within which previous domain was limited, now the three tier of governance (local, state, and national) has become a wider catchment within which the same virtues for prowess previously explored communally, now requires nationwide satisfaction; but not without an enormous economic price tag to the individual who figuratively is still the family head. By so, an attempt is made by family heads to provide identity for their households through their acquisition of housing at the local, state and federal levels of governance created by westernization rather than in the compound enclave as previously defined. Therefore, the meaning of housing to the traditional African is deeper than the secular notions of the World Bank. The rights of acquisition, the place of

deity/divinity, the aura of accomplishment personalized in its exclusiveness as favored and approved is vital. Meanings ascribed to housing are based on needs in relations to state and status, and the ceremonies attached to cultural significances.

Abdelhalim (1978 in Hunter, 1984), described 'the building ceremonies' and identified three attributes as follows; Order, Regulation and shared values. Order was a set of ceremonial activities essential to everyday life, to which regulation was a set of rules of cooperation and lastly that shared values were means of exchange of communal collaboration and services. In this regard for the building process to be initiated two key pre-requisites must be fulfilled which were; firstly, the community establishes viable and realistic goals through community based institutions such as the social group of young men, and elders, since age was a vital part of this community based institutions. Secondly, there has to be a suspension of social activities; to enable those selected actors fulfill their civic responsibilities in the building ceremony.

The building ceremony was in direct relationship to general life style. Most towns and villages of this period (apart from those which were the capital of Kingdoms), were associated with enclave of housing which served the entire community either as a single nucleus (of continuous building with rooms enough for all) or as multi-nucleated buildings which houses families and their generations distinct from other interacting families.

More so, land tenure was in communal thrust held by the King or Chiefs or Elders. Single families with lines of generations owned lands that are inheritances. The housing delivery system was through the building ceremony process and this was communal in nature. It will suffice to say the policy framework was circumscribed in the monarch and patriarchal beneficiaries.

In modern parlance, the institutions were the leadership (king, priest, and elders) and the young adults formed the organizational structure for delivery. Since most of the actors' coalitions revolved around the youths, coordination of the building ceremony and the building activity was largely that of the priest, whose function also included spiritual mediation.

Land allocation was a family based affair. The relationship between King and relatives was such that loyalty to the crown and hard work were important aspect of the communal lifestyle. Specialization of the building trades was not a necessity in housing delivery system, except for public buildings and palaces, where sometimes efforts of specialized non-residents of that

community are utilized for a consideration (usually by barter/some form of agreed remuneration).

The evidences of this process is still seen in most Nigerian cities like Lagos, where family lands are still very popular and form the bulk of land supply for private development through self-help mechanism. Modern legislative processes (of government acquisition of land through the land-use decree, 1978) exist in duality with family owned lands. The enforcement of the decree is often a problem for the private sector that must pay-off family landowners after paying government to access land for development projects and especially housing; and sometimes gets involved in settling related family rifts in relation to equity in distribution of accrued benefits from the sale of the land.

From the foregoing, housing delivery systems was not a variety of approaches based upon paradigm shifts of economic factors; rather it was a direct building ceremony, which was based on cultural factors. It was about socially planned objective and not government objectives to build the house/s whose enclave was the commune. Evidence of PPP was succinct to the patriarchal beneficiary and his community. In retrospect, the classification of the youths' coalition and the patriarchal beneficiary would be organizational, as they both shared an agrarian interest first before the responsibility of the building activity, which was relatively compulsory. In most cases, an agrarian prowess of the patriarch was a pointer to the type of legitimacy he brings to bear on the size of his dwelling as well as the location within the entire community in relation to the King and the market square in more modern terms. On the other hand the structure of leadership along the hierarchy of the King first, the priest and the chiefs constitutes the institutional arrangements. The patriarchal beneficiary in the view of this institution must qualify to access the land, own the type and size of dwelling; it is upon this that the institution can instruct the actors to prepare and engage their services for this purpose. This housing was void of syncretism, since the 'compound dwelling unit' was basic to the patriarchal dwelling unit, rather than the modern single-family dwelling unit. In these arrangements, standards setting and the notion of adequacy were by the regulatory function of the priest, elders and chiefs who performed functions akin to that of the institutional machinery as we have it today in modern governance (Hunter, 1984).

#### **4.6.2 Colonial Period 1914-1959**

Most of the early part of this period experienced the traditional housing delivery systems within the native towns and settlements. Mabogunje (1977) identified three categories of towns



under colonial rule namely: Native city, non-European reservation and the European reservation quarters.

Formal housing delivery systems in this era generally took its origins from the power relations between the British Crown and the Colony based on the need to deliver housing that was adequate for the expatriate and a few indigenes that supported British interests. This was in tandem with a similar working class groups in Britain; the housing provision was through direct government intervention (Pugh, 1994). Therefore, for the British this was a logical approach to cater for their own and so the colonial governments' launch to create the colonial/European reservation quarters, later to be called government reservation areas (GRA) by the post-colonial ruling class. These neighbourhoods were characterized by their modern architecture (succinct to tropical architecture), and secluded from the indigenes as can be seen all over colonial Africa (See figure 4.13).



Source: [www.googlemap.com](http://www.googlemap.com)

**Figure 4.13** A-layout of Colonial GRA; B-layout of indigenous estate; C-excised layout for military use; D-layout of traditional/native settlement engulfed by westernized neighbourhoods.

**NOTES:** A- is Ikeja; GRA, B- is Maryland; C- is Ikeja Military Cantonment; D- is the onigbongbo village. Scenarios like this are all over the city and increases the nucleated divide between neighbourhoods. The GRA's are gridiron layout strictly based on tropical criterias and western styles, while the native neighbourhoods lack formal planning and the indigenous estates are semi planned driven by profit-motives of the developer.

This further nucleated the existing divide between native settlements and emerging canters of commerce as show in figure 4.13. It was this direct intervention by the colonial government to produce, distribute and consume housing among its expatriate workforce within areas of the city that led to the subtle change in the perception of the natives about the newer meaning of housing and consequently syncretism as a lifestyle (Aradeon, 1991).

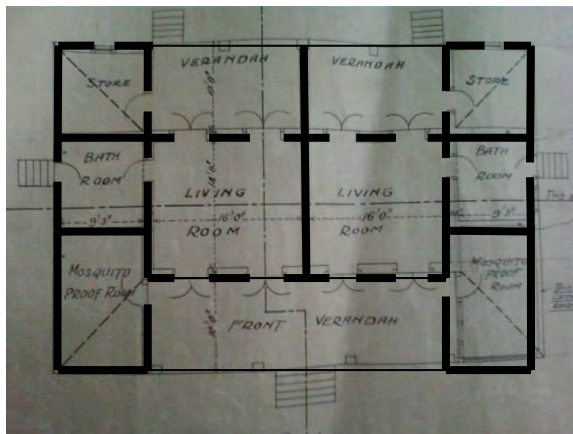
The creation of new settings/environment is in total divergence to the communal and patriarchal traditional dwelling units. They set precedence for the future of housing delivery in



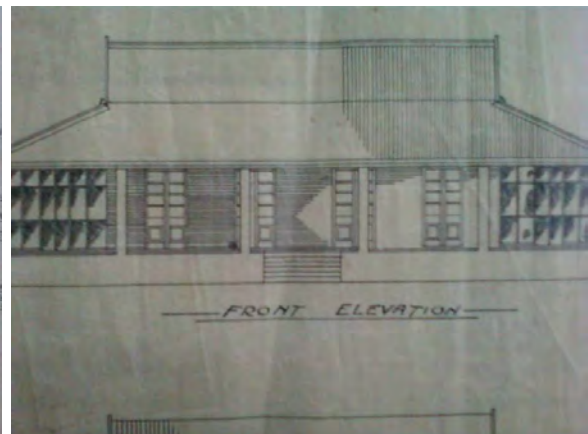
colonized territories. European floor plans, imported building materials, and different construction techniques enabled the achievement of housing production.

Implicitly, the general interpretation of Europe's context of housing in Africa had taken roots in many ways and one of such early interpretation was the elevation of the house foundation/ground floor by about 900mm on stilts to reduce mosquito attack, especially in the Lagos area.

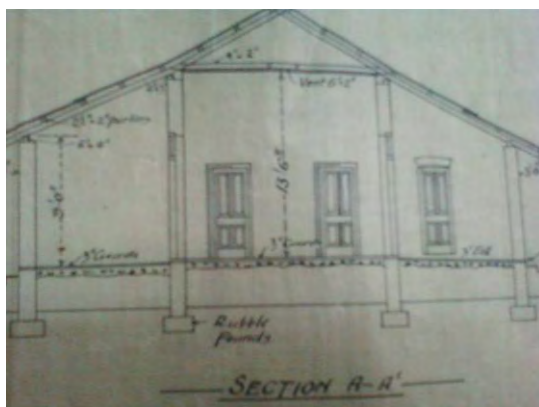
The notion of elevated foundations against mosquito attack although rudimentary originated from the public health theories that mirrored the deep-rooted fears of the colonialist and their need to design against the infestation of Africans and African conditions (Fry & Drew, 1956). Figure 4.14 shows a typical design approach to mosquito attack, showing elevated foundation and Mosquito proof room on the left and right to the dwelling unit usually screened with perforated sandcrete blocks serving as 'air bricks'.



A-Floor plan of double quarters;to the frontal-left of plan is the 'mosquito proof room' a design solution to health problems.



B-on the extreme left and right are the fenestrations in elevation to the mosquito proof room.



C- Section across building showing the building elevated from the ground level by about 900mm.for the same mosquito reasons.

Section double Quarters(8th Jan,1914)

**Figure 4.14** Design solution to health problems (source: original picture of drawings,NRC drawing archives,1914;field survey)Notes: From figure 4.14 –C, the section shows the elevated bungalow styled house intended to reduce mosquito attack.

However, while these design based inputs were being invigorated into the colonial era for housing among expatriates the access to land was facing a revolution that would change housing arrangements for ever in the British colonies. One of such changes was that land tenure, rights, and access to land became formalized through titles that bore allegiance to the British Crown through local administrative institutions. Suddenly, for natives, land could be confiscated for better purposes one of such been the housing needs of the colonialist and this was achieved through local monarchs who were installed and recognized by the colonialist.

The Lagos standard of 29 January 1908 observed the resistance of indigenes when Governor Egerton decided to establish a European reservation (later called government reservation areas) in central Lagos around the race course area, by forcing Lagosians to vacate their homes (Gale1979,Mabogunje1992). Such resistance signaled the need for future legislation through a buildup of ruling class sympathy by way of doctrines and establishment of legislation; one of such was the use of similar urban regulatory frameworks as it obtains in Britain, such as the enactment of the township ordinance in 1917.

Shortly after the amalgamation of the protectorates of 1914, which strengthened both the colonialist and their selected indigenous ruling class alongside colonial pursuits and passage of the township ordinance this gave credence to the classification of towns into three categories namely; first, second and third class towns. Existence of amenities like water and electricity determined the class rating of the town. Therefore, cities in line with government directive needed to work hard to achieve a status that enabled them to improve and benefit from central largesse if they were to remain relevant. Lagos was the only first class town in Nigeria. It was the first to generate and distribute electricity in 1896 (other sources claim 1856 before Munich) and pipe borne water in 1914 (Smith, 1978). This classification thus set the pace for the perception of adequacy and the standards of adequacy for living conditions as a prelude to future institutional regulations, which emanated from internalized realizations of weaknesses and the need for the control of local settlements. Given that formal housing delivery system was for the expatriate community and at best served the interest of those who served the expatriates to an extent, there was a growing need not to ignore this obvious need for housing the emerging indigenous ruling class.

This need and growing commerce attracted more people from the hinterland and consequently more housing and so, more institutional frameworks were introduced in the wake of rapid urbanization of the Lagos protectorate; which led to poor living conditions and poor environmental/health practices and consequently the outbreak of the bubonic plague in 1928

among Lagosians. These institutions include the establishment of the Lagos Executive Development Board (LEDB) in 1929, with the aim of planning formal development for Lagos; this heralded the concept of public housing after the European order of government, leadership and administration of public affairs (Fadahunsi, 1975).

At this point, the delivery systems by which housing was been initiated and delivered began to change from traditional to various methods depending on need. The emergence of multi-delivery systems for housing emerged from this period. It was logical to note that as the colonial government, increased trade activities (exports to Europe only) more interest in housing relocation began to take roots among the locals. This era began to experience gradual rejection of traditional lifestyles in favor of European lifestyle and the population pressure on the fringes of communities that succored the colonial government continued to increase beyond limits of improvise housing and infrastructure support systems created by indigenes.

Whereas, the colonial government had a policy for housing delivery for its expatriate workers and limited Nigerian junior workers (in the railway) there was no such policy for other indigenous workers and the general public, who actually form the bulk of the society (Fadahunsi, 1975). With transportation as the core focus of transfer of wealth from Nigeria to Europe, the railway lines and associated settlements from across the country terminated in Lagos and by 1930, the railway lines were completed.

Therefore, it was common to see colonial quarters at the end of a commercial town, which is of economic significance to the colonial government, while the larger populations of indigenes remained cramped up in rooming accommodation within the fringes and sometimes the core of traditional settlements. It was the workers strike of 1945 (following the end of the Second World War), that Nigerian nationalists' agitations forced the colonial government to intervene in housing provision. Fadahunsi (1985) observed that, the majority of the beneficiaries were the nationalist (ruling class) and not the public; from here, it is traceable to note the lopsidedness of government housing interventions until date. This gave rise to the colonial government committing itself to some form of planned housing for indigenes for the first time. Again, Lagos was at the center, with a proposal for the construction of over 2000 units under this programme. Unfortunately, government was able to achieve less than 1000 units and this heralded the tradition of never achieving planned objectives in housing within Lagos.

However, between 1900 and 1945 there was massive reclamation of swamp in the Lagos area and this included Yaba (in Lagos mainland), Oko Awo (in Ikoyi/Lagos Island), and Apapa.

The executed reclamation totaled about 1000 acres (See figure 4.15). In effect, this action set the pace for future reclamations, which has now reached points of environmental hazards in the Lagos area (Fadahunsi, 1975).

Therefore, the colonial era birthed three significant institutional failures in housing namely; lopsided allocation of housing to the privileged and powerful, tradition of not achieving planned objectives in housing production and indiscriminate reclamation of land for housing. These failures continue until this day in Lagos and are more severe in current arrangements among institutions and organizations.



**Figure 4.15** shows the various urban areas in relation to land reclamation;  
Source;www.justmaps.com,2010

The Town and Country Planning Ordinance was introduced in 1946; this was fashioned after a similar Act of 1932 in the United Kingdom (Uyanga, 1979). This period was a part of a ten-year plan for the development and welfare of the country (Mabogunje, 1992 ).

The Lagos Central Planning Scheme Law of 1955 was enacted just before the independence to engender efforts to face-lift the city before the independence celebrations of 1960. The resettled indigenes from parts of central Lagos were to be housed in Surulere (north of central Lagos as shown in figure 14.5) temporarily; but it became permanent and the clearance remain uncompleted until date. This partial urban resettlement plan remains the nucleus of central Lagos' urban blight.

However, Mabogunje (1992) described the mass protest associated with the slum clearance of 1955 as the factor that discouraged further efforts at slum clearance in central Lagos. The avoidance of protests continued to shape the attitudes to housing at both the institutional and organizational levels of social Lagos.

In addition, the adoption of the McPherson Constitution in 1954 followed by the internal self-government of the regions in 1956 saw yet another institutional infusion into the already debilitating housing conditions for the majority of the middle-income. This was the enactment of the town and country-planning law in the western region; and this was followed by the establishment of more institutions with the objective of catering for housing delivery that seems to elude all efforts at achieving planned objectives.

In a bid to pacify, yearnings of the ruling class and the disgruntled emerging middle-income group new housing delivery systems began to emerge and targeted at the social groups of society with the most pressure on government. The establishment of Western Nigeria Housing Corporation in 1959 served this purpose and was to improve the mechanism for government interventions in housing delivery. The Eastern Nigeria Housing Corporation followed suit and several others along the same policy lines.

Unfortunately, these bodies were charged with developing high-class residential facilities for those who would financially be able to purchase them (Fadahunsi, 1985). This was in total exclusion of the middle to low income groups that primarily rented rooming apartments in Lagos metropolis. While the policy machinery was strengthening the upper income groups and the ruling class, the poor relation between government and the rest became evident. A faulty financial mechanism was the reason behind inaccessibility of housing for the middle-income that had loan repayment potential but no fiscal assistance from government (Onibokun, 1975, 1986).

To this end, social groups inadvertently formed response mechanisms to circumvent government policies for private surplus accumulation. Therefore, as the demand for housing increased, new towns, and settlements opened for housing development but the arrangements among, social groups/ruling class from the institutions and organizations overtly derailed planned outcomes. Suffice to say that, the emerging ruling class were from the civil service, armed forces, academia, politics and commerce; they formed an heterogeneous social group

(or elite) with diverse viewpoints but, with a consensus on governance and its economic largess to which housing was an integral part.

However, the establishment of the Nigerian Building Society (NBS) in 1956, which was the cradle for financing housing on mortgage basis as an institution, was established (FGN,2006). The NBS was a limited liability company a joint venture of the British, Federal, and Eastern Nigerian Governments. This was the primary mortgage institution, which granted mortgage loans to individuals financed through savings mobilized from the public. It operated many years in Lagos with little impact. The client base was a small group of economically empowered ruling class and privileged middle-income. They met the conditions of borrowing and understood the relevance and advantage of home ownership and accumulation of surplus value over time.

The value transformation and realization of the economic potential of housing among indigenes gave rise to massive acquisition among households and actors/partners. The replacement of the expatriate workforce due to independence from colonialism and the economic value attached to enlistment with the ruling class in the public sector became the condition for self-aggrandizement and corruption. Housing estates created by housing corporations became exclusive havens and preserve of elite/ruling class alongside the already cited GRA's.

The regional housing corporations were the earliest form of housing estate developers and providers of mortgage finance; although supported by government, they were producing "subsidized" housing and planned layouts for those who could afford them directly. The extent of this subsidy was however not clear, neither was the distribution method consistent. Affordability was in direct relation to employment status; and it was by either government or the organized private sector alone. Especially British entrepreneurial owned companies such as John Holt, Lever Brothers and the definition of income group was relative to comparative earnings among indigenous people in the middle cadre of this workforce. Such definition was in total exclusion of the income groups among indigenous/native workforce, which were agrarian and mostly petty traders; whose housing development was largely informal and the type of housing was rooming apartments that succored the desperate housing need in the Lagos metropolis (Fadahunsi, 1985).

However, this period experienced rapid replication of duties and function of institutions with little capacity as well as real scope for which these operatives were to function. One of such

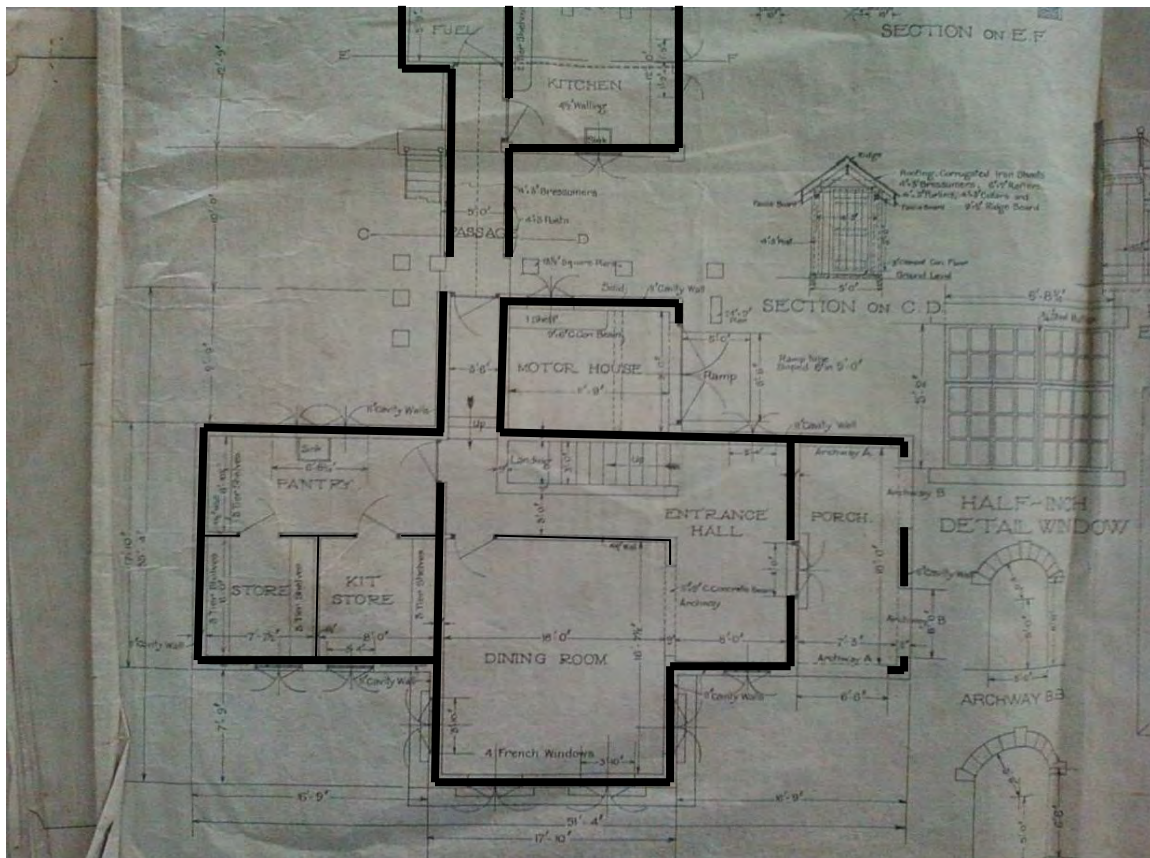
was the establishment of the Ikeja Town Planning Authority with jurisdiction over those parts of the Metropolitan mainland Lagos and this area was not under the control of LEDB. Fadahunsi (1985) further pointed out that, the period after 1960 was a period of consolidation by indigenes towards strengthening the housing delivery systems that were emerging. The policy framework from here on revolved around government policy and ad-hoc private sector initiatives. The workings of government agencies at cross-purposes originated from the need to reinforce government resolve at enforcement by creating legislative containment/control agencies; in most cases, elaborate planned objectives were never achieved.

In retrospect, the colonial housing period experienced the introduction of the single-family house form and the conscription of local communities to depend largely on foreign building materials' consumption. Single-family plots of land emerged from gridiron layouts: From which, the realities of spatial use gave rise to building regulatory contraventions among households and housing development actors/partners and experts. Rules and regulations that are alien to their culture and values that are not economically sustainable for their housing delivery systems were introduced into their socio-economic systems. The outcomes are yet to be fully studied and understood until date (King, 1990, 1976; Abu-Luhod, 1965 in Guggler, 1982; Njoh, 2002, Hunter, 1981). Essentially, the design features for the African staff quarters were distinctively different from those of the expatriate workers.

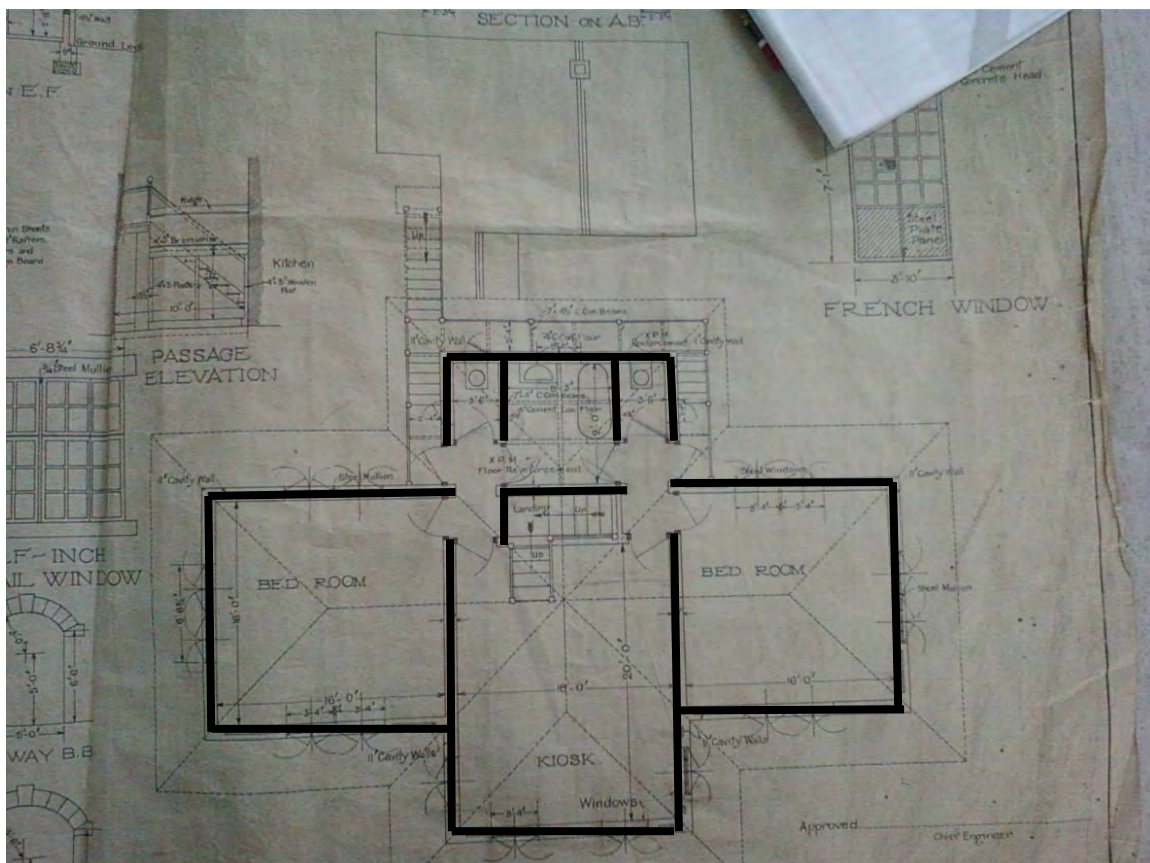
Figure 4.16 shows a typical African staff quarter for middle-income employees of the colonial government. The Ground floor comprised of the entrance porch, entrance hall, Dining room, Kitchen store, Pantry, Store, and Stairs. The external motor house, kitchen, and fuel room (for firewood). The Upper floor comprises of, two bedrooms, external bath with wash hand basin, and two external WC's without wash hand basins. The stairs terminates on the first floor in a kiosk (a family lounge/living room). Entertainment on the ground floor, which is the public space, was limited to eating only (Dining). This is in total contrast in terms of luxury, and culture to the typical managers' quarters for the expatriate community as shown in figure 4.17.

The general manager's quarters comprises of the ground floor, external kitchen and motor room/garage; study, entrance hall/stair hall, dining room, lounges, visitors WC, Cloak, and the upper floor; bed rooms en-suite with toilets, wardrobes, box-room, dressing room, sewing room. These were typical of the activity-defined spaces of Eurocentric lifestyle as different from the space defined activity design of the courtyard house type as earlier cited.





Ground Floor Plan

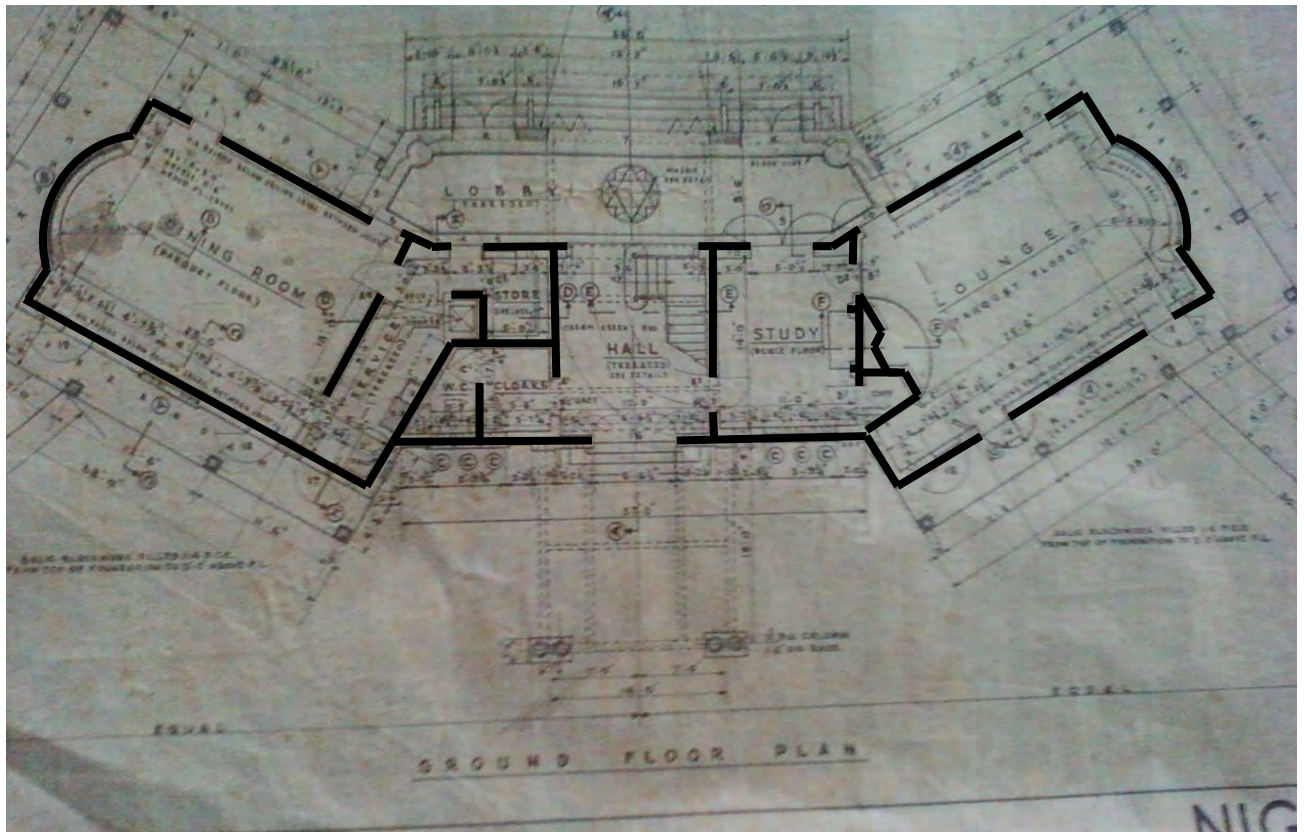


Upper Floor Plan ( approximately 120 sqm ground and upper floors)

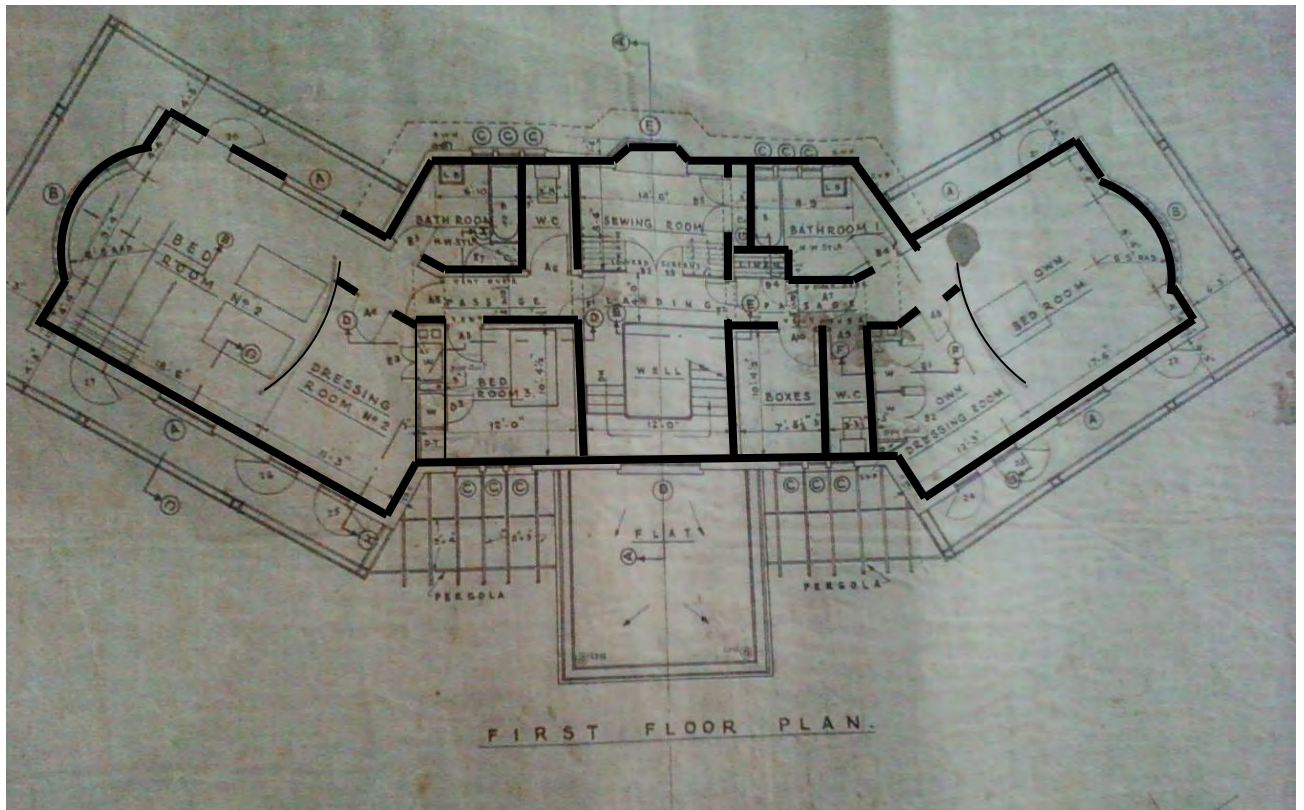
**Figure 4.16** Standard type Single-family African staff quarters, 1929 (source: original picture of drawings, NRC drawing archives, 1929; field survey)

Note: The middle-income indigenous staff household is about 5-persons or more while that of the expatriate is 3-persons or less.





Ground Floor



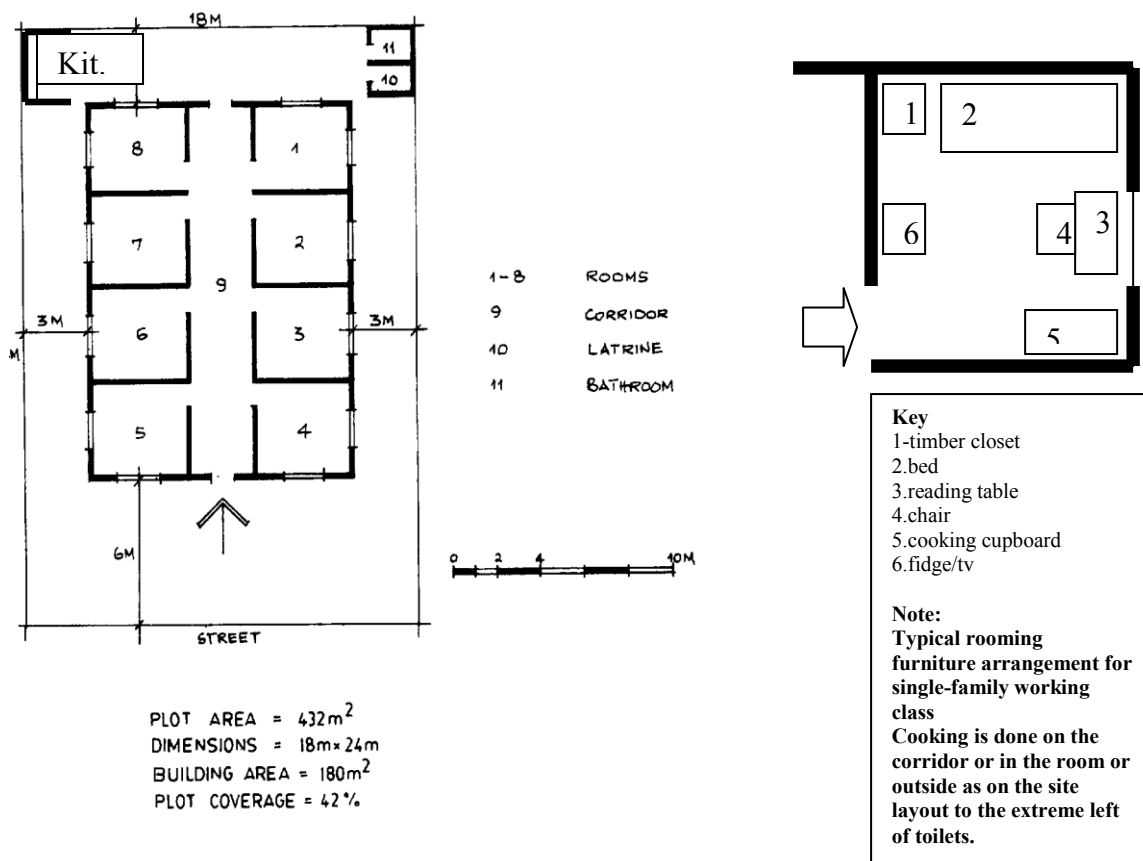
Upper Floor (approximately 230sqm ground/upper floors)

**Figure 4.17** General Managers Quarters(12<sup>th</sup> May,1949) (source: original picture of drawings,NRC drawing archives,1929;field survey)

#### 4.6.3 Post-Colonial Period, 1960- to present day

The housing delivery systems of this period were predominantly accelerated private sector systems characterized by the traditional systems and self-help systems alongside government (public) sector systems. Through the African Staff Housing Scheme, the NBS was charged with financing for middle income and upper income earners.

The earliest traces of private sector housing are the rooming type. They are located all over the traditional precincts of the Lagos area (see figure 4.19). Otherwise known as face-to-face houses; derived from the hall-way/corridor/lobby from which rooms branch out (Vlach, 1984; Aradeon,1991, 2005).



**Figure 4.18** Plan showing adaptation of the indigenous single-family house into rooming apartment.

**Notes:** for single families as urbanization took its toll on the city with increasing anonymity. A functional dialect of the past in an economic and social constraint; the space depicts a social arrangement that has stood the test of time for most working class in Lagos and other cities of Nigeria (source Ikejiofor,1999)

In the rooming apartment, shared services was the design norm such as; Pit latrine/Toilets, and shower rooms, are located at the rear terminating closely to the property line. Cooking is within the room or along corridor/hallway or outside the building as shown in figure 4.18. The delivery system of these houses was through self-help; moderately affluent traders, junior staff

members of the working class and Europeans (in their case as boys/servants quarters attached to the main building as previously cited) are usually the bulk of the providers of such housing. Since, the provision of such housing is often associated with employment (Morgan, 1979). Mabogunje, (1992) observed the input of the colonial government and the post-colonial government towards traditional planning through the instrument of the Town and country planning ordinance. Most of these housing stocks exist within tightly fit spaces with water, electricity, and road networks (not necessarily tarred). Conveniences determined the occupancy of each room without any strict legislation. Table 4.2 below shows an indication of rooming occupancy as at 1961, which was moderate given the overall population of Lagos.(see Lagos population figures under case study in chapter seven).

**Table 4.2** Room occupying ratios in Lagos

| Person Per Room | % of persons (100%) | % of Rooms (100%) |
|-----------------|---------------------|-------------------|
| 1               | 5                   | 18                |
| 2               | 16                  | 26                |
| 3               | 19                  | 20                |
| 4               | 20                  | 15                |
| 5               | 15                  | 9                 |
| 6               | 9                   | 5                 |
| 7               | 8                   | 3                 |
| More than 7     | 8                   | 3                 |

Source: Federal Office of Statistics (1961)

This period also experienced elaborate national planning and much of the literature on housing delivery. For purposes of this study, since the bulk of the documentations are on public sector housing, an examination of various periods that characterizes these national planning policies would elucidate the housing development direction. The first to the fifth national development plans provides an incisive approach to this analysis as follows:

**The first National development plan (1962-1968):** During this period, the development of formal housing was through the public sector while the private sector involvement was limited. **Public housing:** Subsidized housing was mainly through the housing corporations. It involved the acquisition of land, provision of services, division of serviced land into different sizes of plots (lots) and the allocation of the serviced plots to fortunate beneficiaries (Mabogunje, 1992). Konisberger, 1970 observed that the financial allocation to this period for housing delivery was grossly inadequate. Since housing was categorized as a “social overhead” in the

national plan and budget. For example, in 1962 the sum of £1.5million was spent on Lagos towards town and country planning and £2.4million in 1963. In total, less than a 1000housing units were developed by government intervention in this period. Most of the FGN expenditure on town and country planning was on Lagos with a relative neglect of other parts of the country. This accounts for the massive exodus of Nigerians from all over the country to Lagos within the period in search of greener pastures.

**-Private housing:** Private developers acquired land from traditional family owners, produced their layouts for government endorsement, sub-divided the land into plots, and sold to the public (sometimes they build and sell).

**-Self-help housing:** Individuals developed lands that they acquired from traditional family landowners at their own pace and their own personal savings. These lands are often subject to re-sale by landowners when the buyer fails to develop the land on time and market prices/demand has increased.

**The second National development plan (1970-1974):** This was a period of active government intervention especially in financing and implementation (see table 4.3 for an overview of government expenditure on housing during this period). The need for a more efficient delivery system was pursued. Accompanying this was the establishment of relevant delivery agencies that were to be dedicated to increasing the housing stock nationally and predominantly in the urban centers.

**Table 4.3** Nigeria Federal Government allocations to housing programmes 1970-1974

| Programmes   | Amount reserved (₦ million) |
|--|-----------------------------|
| - Reconstruction and expansion of the Nigeria Building Society | 1.400                       |
| - Staff quarters in Lagos                                      | 1.074                       |
| - Transit block of flats in Lagos                              | 0.160                       |
| <b>Total expenditure on housing scheme 1970-1974)</b>          | <b>2.634</b>                |

Source: Adeniyi (1980)

The landmark activities that influenced the public housing delivery system in this period include the establishment of the national council of housing in 1971. The council comprised of all commissioners responsible for housing in the federation. This marked the beginning of concerted stakeholders' response to national housing issues. The achievements were approval of a mortgage bank, recommendation that the national provident fund, insurance companies, commercial banks, and federal/state governments provide funds for the mortgage bank.

By 1972, there was a more intense fiscal policy through acquisition of additional 60% of common wealth shares in the Nigerian Building Society (NBS), thereby bringing FG ownership to 91% while the three eastern states held 9% equity. Another prominent reform was the establishment of the Federal government staff housing board, which took over the assets, and obligations of the African Staff Housing Scheme that previously catered for junior staff housing of the colonial government. The board was empowered to grant loans equal to five times the applicants' annual salary or N20, 000, whichever is less. This action gave credence to future arbitrary pricing mechanism in housing and intensified the need to accumulate surplus value. Government officials' allocated (for their private use) housing which they cannot afford and retailed their allocation to the private sector at below market price. This pattern became a constriction to planned objectives of public housing delivery systems.

However, in Lagos the debilitating housing conditions and the need to meet rising demand in line with global trends of direct housing provision by government influenced the creation of Lagos State Development and Property Corporation (LSDPC; Lagos edict No.1 of 1972). LSDPC was an offshoot of a merger between Lagos Executive Development Board (LEDB) and the Ikeja Area Planning Authority (IAPA). This was to solve problems of poor coordination between planning authorities in metropolitan Lagos and the need to develop housing directly. This merger created the first autonomous housing corporation that was neither strictly public nor private in operations; a forerunner of public-private partnership in essence and described as public-corporate in this study.

More so, the indigenization Act of 1973 led to the acquisition of 100% ownership of NBS by the Federal government of Nigeria and its subsequent transformation into the Federal Mortgage Bank of Nigeria (FMBN; later established by decree 7 of 1977). The role of FMBN was retail mortgage business as the apex mortgage bank. Unfortunately, the shortage of long term funds became the major setback as it was unable to fulfill its role effectively. This issue continues unresolved in national fiscal policies that followed; instead, the creation of more government agencies was favoured in a bid to meet planned objectives in line with direct housing provision. Unfortunately, this policy direction was target cost driven and pre-determined by tacit profiling of households' and singular affordability status for the entire country.

One of such additional agency was the Federal Housing Authority (FHA) established in 1973 (by Decree No.40 of 1973). This was to cater for National Housing programmes and its first assignment was the establishment of the Festival town in Lagos (for FESTAC 77'). The role of FHA and those of the existing Federal Ministry of Works and Housing (the offshoot of public

works department-PWD) were conflicting in terms of housing provision. There exist the conflict between FHA, Federal Ministry of Works, Federal Ministry of Housing and Urban Development, and Federal Ministry of transport and other agencies of government with direct and indirect interests in housing. The clarity in stakeholders' delineation remains elusive due to a non-inclusive approach of actors/partners into housing issues at the national level.

The lopsided approach to housing issues remains evident in the allocation of the housing after FESTAC 77' to households. This evidence shows the incoherence that existed among institutions and the poor mechanism for housing delivery. Aradeon (1983) noted that, the ballot system used for housing allocation shows no theoretical framework to the approach for a national plan of action. The incoherence among institutions is obvious when matched against realities of housing conditions in three urban centers of that period as shown in table 4.4. From table 4.4 it is evident that 70.65% of the houses surveyed had public pipe-borne water connection as their main source of drinking water. 76.4% of the households occupied a single room with shared amenities.

**Table 4.4** Housing conditions in selected urban centers in Nigeria 1972-73

| Urban Centre | Houses with pipe-borne water (%) | Houses with flush toilets (%) | Houses with electricity (%) | % of household occupying one room | Average no of person per room |
|--------------|----------------------------------|-------------------------------|-----------------------------|-----------------------------------|-------------------------------|
| Lagos        | 70.6                             | 41.6                          | 96.2                        | 76.4                              | 4.4                           |
| Kaduna       | 42.1                             | 16.6                          | 66.4                        | 68.2                              | 3.9                           |
| Ibadan       | 44.3                             | 25.6                          | 57.2                        | 51.3                              | 2.3                           |

Source: Adeniyi (1980)

**The third National development plan (1975-1980\*** marks the oil boom period): This period saw rapid government spending and inflation caused by the arbitrary salary increase of government workers (also known as Udoji), and some of the policy highlights are as follows (see table 4.5 for an overview of government expenditure on housing during this period). It shows that less than 3.5% of the development plan catered for housing and this achieved less than 1000 housing units in production nationwide.

**Table 4.5** Approved federal expenditure/Housing allocation: 1975-1980

| Development Plan period | Amount in the Development Plan | Amount Allocated to housing Planning | % Allocated housing & Planning |
|-------------------------|--------------------------------|--------------------------------------|--------------------------------|
| 1975 – 1980             | ₦43 billion                    | ₦1.56 billion                        | 3.49                           |

Source: FOS in S.O. Fadahunsi, 1985

The policy framework was to provide housing for all Nigerians by direct construction and funding. This led to establishment of the Nigerian Construction Building and Road Research Institute (NCBRRI, on the 24th July, 1975). Later known as the Nigerian Building and Road Research Institute (NBRRI), established by decree 1977 (of NSTDA order 1977, supplement to official gazette No.49, Vol, 64, 13 October 1977). The objective of NCBRRI and NBRRI was to transform desirable syncretism; a change of local appetite from imported building materials to the use of traditional building materials. This was in a bid to facilitate housing delivery and reduce overall cost of housing construction. Unfortunately, the emerging housing material solutions were least attractive to even the lower income group. More so, due to the cost of land and remote location of the housing most households were unwilling to accept these houses since the entire housing package did not make good value sense for households, housing development actors/partners and experts; resulting in poor patronage of the institutes' housing solutions.

In order to deal with the prevailing shortage in housing supply, inadequate housing stock in comparison to teeming population of Lagos and major cities the government turned to yet another agency creation. This was the establishment of the rent panel through the rent control edict of July 14 1976. The policy focus was to discourage private sector commercialization of government-subsidized housing for the poor and middle income and to regulate rents to avoid exorbitant charges by property owners. Again, governments' policy failed to respond to realities of market forces by regulating the housing rental price (housing, was not to be a catalyst to economic activities by state budgetary planning) in total disregard of the stakeholders. Government agents relied on the public to report property owners whose rental values were above stipulated regulatory benchmarks. It became apparent that demand outweighed supply, there were too many tenants chasing too few housing, reports were rare, and monitoring was weak given the scale in terms of population. To deal with the condition the federal government attempted to tackle national housing issues head on by establishing the Federal Ministry of Housing and Urban Development for the first time but was later dissolved as cited earlier, the institutional delineation was weak and roles and functions were not clear. This ministry was re-establishment in the late 1990's by former President Olusegun Obasanjo.

These events indicated changing lifestyle and stakeholders' roles, often ignored by policies. The result is failure of planned programmes at the national, state, and local levels of the Nigerian society. By jostling existing policies and frameworks and reviewing the focus of institutions, the housing conditions thought to be degenerating were to improve in quality and



quantity for society's needs. In a bid to achieve the objectives of this period, the NBS, reduced interest rate in mortgage operations from 10% to 3% in 1976 (FGN, 2003, 2004).

This action did not take into consideration that the operating fiscal environment offered direct interest of 6% to savings depositors. As a result, NBS (even after its transformation into FMBN) was unable to compete in the savings market. The resultant effect was a long era of resorting to operating subvention from the federal government. This gave rise to the need to reconstitute the NBS into FMBN with a capital of N1, 000 million for a population then of about 65million Nigerians with an estimated 85% housing need, both in rural and urban centers. The concentration was again on Lagos as a matter of policy since this was the seat of government. However, the population of Lagos was over 3million people and the Wilbur Smith report (1976), showed that Lagos would require over a million housing units to house averagely 7-8 persons with its entire infrastructure.

By 1977, it was obvious that the economic framework for national housing through the NBS needed an overhaul. This led to the establishment of Federal Mortgage Bank of Nigeria (by Decree No.7 of January 20, 1977). An authorized capital of N20million of 200,000 share priced at N100 per share was instituted. To achieve this reform, the FGN relied on the expatriate community through the effective management of FMBN by "Berenshot Moret Bosboom" (BMB) of Holland between June 1977 and June 1980. By June 1979, the FGN appointed members of the new board. This ended the direct foreign involvement with recapitalization from N20million to N150million and a joint ownership by the FGN and Central Bank of Nigeria, CBN (on a 60:40 ownership structure respectively). This financial reform again brought about the introduction of tax-deductible interest on loans and the capital allowance of up to N10, 000 for owner-occupier housing (which is no longer in-force today).

Another policy infusion thought to be a critical success factor for housing in the national framework was the introduction of land reforms. This led to the establishment of the land use decree in 1978. The aim was to eliminate obstacles which prevented public housing agencies and private sector investors from acquiring land needed for housing projects implementation. By this, rationalizing the multifarious land-use tenure systems in the country as well as turning all undeveloped land in the federation over to government ownership.

This was theoretically logical, but did not take into consideration the outcome in terms of social response; a people of traditions, religious bias, and now guided by alien institutional framework derived from a constitutional objective. The organizational structure needed to



strengthen these policies did not exist; there was no organized private sector and the institutional framework did not recognize their existence for direct involvement in housing. This created a loophole for land speculators to subsist within governments' institutional framework to the detriment of households' direct demand for housing. Households and housing development actors/partners had to buy land from families and land speculators before ratify the land with government agencies to qualify for obtaining a title deed from government, which enabled them to seek development loans from financial institutions. This framework meant double payment for a single land transaction to families, land speculators, and government. The process cost of land acquisition, ratification, rising cost of building materials and logistic problems are among the few costs transferred to households, actors/partners that makes for failure in planned objectives. By so, raising the effective price of housing and forcing households and actors/partners to overbuild their land once acquired in a bid to recover their cost of investment on the land. The origin of excessive surplus value accumulation in Nigeria's housing is traceable to this epoch.

In retrospect the emanating architecture of this period was seen in the development of most Nigerian cities at a frenzied pace with little architectural theory; rather an expenditure based-functional and minimalist approach to maximize land, space and costs of material and labour within the regulatory framework thought to address the objectives of stakeholders. As pointed earlier above, the framework did not address issues of tradition, religion contextual to enacted decrees, which at best served the purpose of rapid westernization of the Nigerian nation-state. In central Lagos (Lagos Island/Isale Eko) adjustments to the town planning edict of Lagos tried to regulate setbacks (front, rear, and sides) with the approvals to build wall to wall for most commercial buildings. The abuse of such regulatory framework abound all over central Lagos as the design knowledge needed to refine this policy was missing and the capacity by planning offices to infuse innovation was non-existence. Usually, in the approval process a tabloid of design compliance items forms the basis for vetting (evaluation of design for approval). It is important to note that these compliance items become stale as lifestyle changes and policies are never revised until public outcry on issues. To this end, households, actors/developers, and professionals unofficially pay touts and government officials alike to obtain their approvals. The implication is that, housing needs were not comprehensively achieved (Gyuse, 1984); and this is evident in the incoherence of the architecture of cities across the country as guidelines were often circumvented. Unfortunately, these outcomes accounts for about 76% of housing in Lagos, since they are rooming and fall short of regulatory standards (Wilbur, 1977). The standards related settings for constructing rooming housing are often discretionary to the whims of households and the major course of urban sprawl (Mabogunje, 1978; Ikejiofor, 1999).

The employee housing scheme was the last resort in this era to involve the private sector. Since government saw that, the housing and funding structure in place could not meet the demands of those outside of government who form the majority. Therefore, Decree No.54 of 1979 establishing the employee housing scheme was promulgated. The decree made it mandatory for employers of labour (public and private sector) to establish, execute, and maintain a housing scheme for its employees and a replacement of the rent control edict with the rent control order 1980. Both policy adjustments catered for social focused groups whose interest among stakeholders was most vocal as government failed to achieve planned objectives yet again.

The economic downturn in this era due to excessive fiscal spending by the President Shagari administration resulted in the use of austerity measures, which led to various abandoned housing schemes and programmes. The popular Shagari-housing was one of such failed national housing programme. The architectural design typology interpreted a 'national lifestyle' central to housing; the dualism expressed was traditional and religious in intent yet the house-form was a typology influenced by westernization. The adopted housing delivery system was western. The initial public reaction was rejection of the house-form and function, as it did not meet the requirements of households (Guggler, 1982; Aradeon, 1982).

It is evident that this period experienced many policy reviews and the creation of multiple agencies believed to ameliorate the housing conditions from the national level. Unfortunately, architectural design, lifestyle, housing based planning regulatory framework, coherence in policy and stakeholders delineation were not the focus of the policies that emanated from this period. Rather, fiscal policies based on economic reforms and agency based implementation remained the national strategy to improving housing conditions.

**The Fourth National development Plan (1981-1985):** In this period about N1.6billion was allocated to housing; 40,000 housing were to be constructed in 303 local governments of the federation. This was again by direct government involvement with private sector contractors and government allocated funds. As at 2010, the 303 local government areas have increased to about 740 local governments a clear indicator for the need of stakeholders' delineation in not only housing but also a critical success factor to national planning. In this period out of the 40,000 planned housing less than 2000 units were built.

In the fourth national development plan period there was a steady decline in the ad hoc role of the private sector in housing development. However, governments' involvement continued to rise in budgetary allocation. Table 4.6 gives an indication of the comparative role of public and private sector from 1962-1985. Between the third and the fourth national development plan there was about 50% drop in private sector role while there was a continued rise in the public sector role. It is evident that there was a steady decline of government involvement in housing delivery and it rose to an all time high of 71.9% between 1975 and 1980 and a further decline beyond 1981. In comparison to the private sector, that shows a decline from 1962 to 1985; except for a slight increase from 43.6% to 45.2% between 1962 and 1974.

**Table 4.6** Comparative role of government (public) and private sector

|   | Millions | % Distribution |
|---|----------|----------------|
| First National Development Plan<br>1962-1973  |          |                |
| -Public                                       | 1,334=8  | 56.4           |
| -Private                                      | 1,031=8  | 43.6           |
| Second National Development Plan<br>1970-1974 |          |                |
| -Public                                       | 1,976=4  | 54.8           |
| -Private                                      | 1,631=6  | 45.2           |
| Third National Development Plan<br>1975-1980  |          |                |
| -Public                                       | 32.86    | 71.9           |
| -Private                                      | 12.87    | 28.1           |
| Fourth National Development Plan<br>1981-1985 |          |                |
| - Public                                      | 71.5     | 86.0           |
| - Private                                     | 11.5     | 14.0           |

Source: T.O.Ilugbuhi, "Getting out of the Raw Materials Crunch". The Guardian P,11,8 July, 1983, in Aradeon (1983), Habitat, Vol. 7, No.5/6 Pp385-394.

**The Fifth National development plan (1985-1990):** This was during the structural adjustment programme (SAP). In order for government to ensure that allocated funding got to beneficiaries, a two-tier housing finance structure was created. The FMBN as apex mortgage institution and mortgage banks as Primary Mortgage Institutions (PMI's). This was possible by promulgating the mortgage institutions act, Decree 53 of 1989. About 300 PMI's obtain registration in a finance boom to cater for loan disbursement and encourage savings among households. Unfortunately, this was short-lived as the stakeholders were not the beneficiaries and it became a pyramid scheme by which the public were defrauded. The promise by the FMBN of long term funding was elusive to most of the PMI's. Coupled with an interest rate rise for deposits; most PMI's had no choice but to engage in trading with depositors funds to meet ROI on short-term basis. However, by 2004 the number of PMI's had reduced to about

83 and the numbers keep reducing due to paucity of long term funding for housing development.

To strengthen the framework for mobilizing savings from households the federal government established the National Housing Fund (NHF, Decree No.3 of 1992). This was a mandatory contribution by all workers earning N3, 000=00 (approximately \$20) per annum and above to contribute 2.5% of their monthly income as a means of ensuring their access to affordable housing. An appreciable rise in total collection is evident in the last ten years but there is weakness between the private sector and this policy. This is because, most contributors work for government and transnational companies; unfortunately the larger society are self employed or employees in informal sectors of the economy guided by weak or no regulations from where remittances into NHF can be enforced by government. To improve the mortgage financing conditions, a deconsolidation process began in 1993, whereby, FMBN unbundled its retail mortgage business as federal mortgage finance limited (established by decree No. 82. of 1993). This made FMBN a wholesale and secondary mortgage finance institution, which relied on funds from the NHF.

However, due to political instability caused by June 12<sup>th</sup> 1993 annulment of the Abiola election (as President elect), up until May 1999 after the swearing in of the Obasanjo administration very little was achieved in the housing sector as sectarian and civil unrest characterized this period.

The National planning periods of the early 1960's to the 1990's was basically in response to western ideologies, dictates of World Bank and international funding/donor agencies whose primary objective was to alleviate poverty in Africa by making Africans more depended on western econometric and consumption models. The housing sector experienced standardized consumption from the west for all aspects of the building construction process. The importers of cement, glass, steel, processed timber, roofing sheets, doors, plumbing and electrical components became established entrepreneurs. Where factories that existed to support the production and techniques depended on expatriate knowledge or materials were out-rightly imported for the massive ready market at a cost more expensive to similar income groups in the west. It became obvious to most proponents that re-engineering the fiscal policy for housing was the route to achieve adequacy for stakeholders. Evidently, the quality of housing stock, the price of housing, and the quantity of affordable housing were pointers to the failure of planned objectives yearly.

**Post 1999 until date**, (the democratically elected government of President Obasanjo and beyond): The urgency needed to solve massive housing shortage problems and various socio-political and socio-economic problems led to the establishment of a presidential panel on the merger of Federal Mortgage Bank of Nigeria (FMBN) and the Federal Mortgage Finance in 2000. The consolidation was to develop a strong housing financing mechanism in the delivery system at the national level. This was contingent to developing a strong secondary mortgage finance mechanism based on the NHF and that the consequent mobilization of funds from the capital market would improve the funding structure. Therefore, it became logical to restructure FMBN into a Federal Government Sponsored Enterprise (FGSE), whose functions were secondary mortgage and capital market operation.

As a technical parallel to the financing overhaul, a presidential committee on urban development and housing was inaugurated March 6, 2002 (headed by Prof Akin Mabogunje). Again, it was about the overhaul of established policies and a bid to reconcile disparate stipulations towards comprehensiveness. This policy on urban development and housing recommended the following key changes to the National framework for housing delivery system:

The first recommended change was the consideration for restructuring, re-organization, and re-capitalization of the FMBN. Proposals for two concessionary windows as the needed catalyst for mobilizing financing were proffered. Contributions to NHF to enable beneficiaries secure mortgage finance at 6% fixed interest rate and a commercial window for FMBN to raise finance through the capital market and securitize its mortgages to institutional investors such as pension funds, insurance companies and banks, (REDAN,2007; Guardian,2006).

The Guardian 27 November 2006(p,33-39) *published the 10-point mortgage reform agenda of the Obasanjo administration as follows:*

- enhancement of the housing reform process, particularly to low-income group*
- Establish PMI's as a vehicle for housing and home ownership delivery.*
- Strengthening the secondary mortgage market through capitalization.*
- Promoting rural housing programmes by financing micro-small and medium enterprise*
- Promoting professional in PMI's through training.*
- Encouragement of mergers and acquisitions through increased capitalization of requirements for PMI's.*
- Restructuring of FMBN to improve credit appraisal and disbursement mechanism.*

- Overhaul of NHF administration in the realms of registration.
- Broader definition of mortgage businesses to include tourism, hospital ,furniture and fittings construction and estate management.
- Establishment of secondary mortgage companies(SMC's)to promote secondary mortgage market facilities for residential mortgage loans.(SMC's will purchase pools of residential mortgage loans from PMI's and holding the loans in its own portfolio.The SMC's will package the mortgage loans from its portfolio or from loan originator and structure them into mortgage backed securities for sale to investors in the capital market.
- Promoting mortgage insurances as public-private partnership ventures as a financial product that offers risk/coverage/mitigation to the owners of mortgage loans.

The second reform proposed by the technical committee was the excision of housing from the Federal Ministry of Works and Housing and its establishment as a separate Federal Ministry of Housing and Urban Development by this, giving housing the needed status in national development alongside a focused interest of promoting and supervising housing development for government.

The third reform was formal recognition of stakeholders' in the housing development process. The duality of stakeholders was delineated as a catalyst in the implementation of the new policy by mobilizing and organizing the relevant private sector operators as different from the public sector operators. They were the Primary Mortgage Institutions through the Mortgage Banking Association of Nigeria (MBAN) and Real Estate Developers of Nigeria (REDAN), and the Building Materials Marketers Association of Nigeria (BMAN) on the one part while the professionals were simply a corollary that informed and refined the policy thrust.

Lastly, was the establishment of the concept of mass housing by private sector operators (REDAN members only) to a target price funded by FMBN and it was based on the following categorical assumptions:

- (i) A maximum of 30-year repayment of mortgage loan by homeowners (households)
- (ii) 60years retirement age as obtained in the federal civil service (public sector)
- (iii) Home ownership through mortgage loan stipulated at a start-up (or effective demand) window of between 30-35years of age.
- (iv) The funding structure was based on the public service salary scale, and assumed that such a person should be: On a scale of Grade level 10-13, an average salary of N480,000=00 per annum.

- (v) The disposable income for housing was benchmarked against International Labour Organization (ILO) 25-33% dedicated income to servicing mortgage loan for housing (which is about N12,000=00 per annum)
- (vi) N12,000=00 accumulated over 30years repayment will total N3.6million;when discounted To its present worth,it comes to about N1.6million to N2.3million.
- (vii) The source of housing was a supply chain through REDAN members to provide 3-bedroom houses not exceeding N3.5million for contributors to NHF.
- (viii) A funding ceiling capped at N5million mortgage loan per household was created to cater for inflation and fluctuation in construction costs (REDAN, 2007).

These conditions technically suites the middle-income profile (NBS, 2007). Therefore, the entire policy was on a government stipulated retail price regime for mass housing production and distribution by the private sector with a caveat that the public sector can also participate through its agencies.

Although, the technical committees' report claimed further consultations were made with professional groups involved in the design and production of housing (defined as experts in this thesis); this study faults the entire policy framework in this regard. The socio-economic assumptions, which were a generalization lacked contextual clarity in relation to the realities of spatial-use of design, untrue cost of living, inaccurate cost of construction, and a poor socio-demographic profiling of households. These elements attributed to the policy failure are closely associated to the inability to delineate stakeholders, failure to define roles of institutions and organizations into a functional and holistic unit for efficiency and comprehensiveness (Gyuse, 1984). Moreso, there is the failure to acknowledge that fiscal policies alone cannot drive housing delivery systems in the direction of planned objectives; and the failure of policies to be responsive and dynamic in line with changing lifestyles and the aspirations of the stratified communities it intends to serve.

Table 4.7 shows that the housing allocation continued to increase from 1990 until date, the direct cost implication of government is on the rise. However, housing shortfall continues to be on the rise as well. Such is the paradox between government expenditure and inability to meet planned objectives in housing during this era.

**Table 4.7** Approved Federal expenditure for housing between 1980 and 1997

| Year | Housing Allocation<br>₦ Million | Total Allocation<br>₦ Million | % of<br>Allocation<br>Allocated<br>to total<br>Housing |
|------|---------------------------------|-------------------------------|--|
| 1980 | 333.0                           | 8,089.00                      | 4.12   |
| 1981 | 421.81                          | 5,696.95                      | 7.40   |
| 1982 | 115.74                          | 6,423.41                      | 1.80   |
| 1983 | 142.05                          | 5,874.59                      | 2.42   |
| 1984 | 24.63                           | 3,812.18                      | 0.62   |
| 1985 | 652.78                          | 7,613.26                      | 8.57   |
| 1986 | 34.89                           | 9,076.84                      | 0.38   |
| 1987 | 63.58                           | 6,757.75                      | 0.94   |
| 1988 | 84.40                           | 10,658.57                     | 0.79   |
| 1989 | 123.06                          | 9,297.00                      | 1.32   |
| 1990 | 523.4                           | 34,166.80                     | 1.53   |
| 1991 | 840.5                           | 35,762.20                     | 2.53   |
| 1992 | 1,079.90                        | 47,927.70                     | 2.25   |
| 1993 | 4,203.6                         | 54,501.80                     | 7.71   |
| 1994 | 5,156.90                        | 70,918.30                     | 7.27   |
| 1995 | 8,982.60                        | 121,138.30                    | 7.42   |
| 1996 | 5,944.80                        | 158,678.30                    | 3.75   |
| 1997 | 3,436.0                         | 209,841.30                    | 1.64   |

Source: Federal Office of Statistics (1988) and CBN (1998)

Therefore, it is evident that more funding by government does not translate into adequate housing in the last fifty years of post-independence Nigeria. It is obvious that the poor policy frameworks and inept utilization of policies remains the Achilles heels of every government-housing programme. To circumvent this with the new initiative for Public and Private Participation, there is need to incisively review existing policy frameworks in relation to the private sector to understand the strengths and weaknesses of HDS.

#### **4.7 Response by the private sector in these periods**

Prior to this period, the private sector was always excluded in the policy framework and hence their participation was not clearly defined (Awotona, 1990). Expatriate contractors engaged in the development of housing estates for government and private corporations represent the existence of the private sector in practice (UNCHS, 1993). Since, they had the capacity to source local and foreign funds at rates that drove the prices of housing higher but affordable for their niche market especially in Victoria Island and Ikoyi areas of Lagos.

In this period, the housing sector continued to experience many activities without real growth for various reasons already enumerated in this literature. Effective 2004, under NEEDS-1 (National Economic Empowerment Development Strategy) the re-capitalization of the FMBN from N100m to N5billion brought about private sector hopes. The ownership structure of FMBN in effect was federal government 50%, central bank of Nigeria 30%, and 'The Nigerian Social Insurance Trust Fund (NSITF),' 20%. The restructuring came into effect in 2003, with the establishment of the Federal Ministry of Housing and Urban Development as earlier cited.



These policies based restructuring jettisoned previous financing strategy for housing delivery in favor of the new model: Although the government white paper failed to acknowledge this direction, it was evident that no other strategy received governments' full attention.

In the new financing model, the expected contributions to the financing of housing was to come from; contribution of workers monthly salary of 2.5%, 10% of commercial banks loans and advances (at an interest rate of 1% above the interest rate payable on accounts) and Federal government contribution (in local and foreign currency). Similarly, insurance companies were to contribute a minimum of 20% of non-life funds and 40% of life funds in real property development and not less than 50% of that contribution into NHF through FMBN at an interest rate not exceeding 4%.

However, as at 2005 only 15% of state governments were actively participating in terms of remittance of workers contribution to the NHF, by September 2005, NHF collection rose to N18, 164,212,426 as against N10, 359,236,380 for 1992-2002 (FGN, 2003). During this period, average monthly collection was about N400m from all sectors, namely; banks, insurance, government workers, private employers, uniformed armed forces. This falls drastically short of planned objectives towards achieving a sustainable financing policy framework for housing delivery through PPP.

As at September 2005, aggregate estate loan granted to forty-six developers was N19, 851,508,504; and was for the construction of 11,216 housing units across the country. This research is unable to verify the construction and completion of these housing units by the private sector development companies as approved. However, going by this disbursed amount and the framework for single-family house typology, it will cost about N1, 769,927.65 per housing unit. Unfortunately, at the disbursement-end of finance, the type and quality of housing were unspecified and not verifiable.

Two years later, by September 2007 an aggregate NHF loan of N7, 046,092,367(over seven billion) was approved for 37 PMI's based on the applications submitted on behalf of 5,250 contributors. The utilization of this fund was again not verifiable. The direct impact of this funding on the housing stock cannot be ascertained, as there are only records of these disbursements for which proper documents were utilized to back them up. It is worthy of note that with good financial documents, government would readily release land under its sovereign trust to speculators who pose as real estate investors and developers. In the same manner, with

appropriate documentation, government releases funds to households and developers with little or no verification based on the financial model used to justify HDS. In the case of land, these persons simply obtain irrevocable rights to land. This is currently a national problem and this research foresees a situation where government would have to intervene to curb the current excessive cost of land, which is primarily due to speculators activities rather than intense use of land by developers for housing.

Under the FMBN act no.82 of 1993, section 6(1), (b) and (c), the bank can sell its own debt securities (debentures or bonds).By this, FGN guarantees and establishes a sinking fund towards the timely redemption of periodic loan obligations. Such debt instruments are targeted at institutional investors such as pension funds, life funds, banks, insurance companies etc. This prospect prompted FMBN to float N100billion bond for successful take-off in two tranches of N50billion each (BMAN News, 2009; Yakubu, 2006). Again, implementation of this financial model failed and commercial banks were reluctant to participate as the cost of their depositors funds were high; the alternative was for commercial banks to create their PMI's and route their estate development concerns to benefit from such internalized funding in total exclusion of existing stakeholders for whom the policy was enacted. Therefore, an enablement mechanism though in place on paper becomes ineffective as planned, since the policies ignored the realities of commercial cost of funds. The duality in funding created by the policy shows its marked failure to be responsive to prevailing conditions.

A twist in this condition was the projection that, the proceeds of the bond will be used to finance the sale of FGN non-essential houses in Abuja and around the country under the monetization scheme for government employees. Unfortunately, this did not happen, as most buyers (even government workers), with the rights of first refusal paid cash for the houses they occupied. Although, underwriting commitments of N273.5billion had been received for this bond, the bond is yet to hit the market. It was believed this would have heralded the commencement of the secondary mortgage operation in Nigeria. This research disagrees, as there would have been yet another twist based on social response, considered herein as a critical path to HDS.

From the foregoing historic developments, it is evident that planned objectives between the private sector and the public sector remain unattained. The critical issues centers around the lag between government fund disbursement and the actual utilization of such funds. Government's intent to involve the private sector is inevitable but the framework remains a problem in practice. Generally hinging this results on the problem of corruption would leave very little

window for research to understand the causes and consider options that would circumvent the social weaknesses in the course of implementation. It is evident also, that from the rising profile of funding, housing delivery did not become more efficient within the terms of reference of this research.

#### **4.8 Conditions for private participation in Current policy framework**

The September 2008 copy of the Federal Ministry of Housing and Urban Development Public-Private Sector Partnership guidelines for investment in housing development establishes the following as the strategy for PPP:

(i)Key stakeholders are; FMHUD, all state governments /local government councils, real estate developers(not limited to REDAN members, general investors, manufacturers of building materials, financial institutions, universities and polytechnics, research institutions, donor agencies in housing and urban development, communities and CBO's ,professional bodies and associations etc.

This is clearly indicative that the key ministry backed by law to formulate the strategy for inputs is still unable to delineate the stakeholders in the partnership.

(ii)Under the obligation of stakeholders, the investor developer shall mobilize financial resources to fund development and show 'concrete evidence of availability of funds through an irrevocable letter of commitment from reputable financial institution'. This again underscores the entire reforms in the mortgage sector as all other forms of coalition within organizational arrangements among partnerships are totally excluded since only a few can obtain such document and the implication of cost recovery once such document is obtain would certainly negate the policy assumptions.

(iii)The planning and design guidelines were to be contextual to each state government and a consideration was given for environment, culture and lifestyle of the people (as a key component of the architecture specifically). This is certainly not feasible where target price and single-family house typology are set as the tangible development objective of the policy for implementation.

(iv)Terms and conditions for the partnership would be subject to a memorandum of understanding and development lease agreement. These two documents alongside the private partners' layout designs, architectural/engineering drawings, and bills of quantities are to form the legal contractual document between the developer and government. Effectively, the tenure

aside from funding is the next key component established by the government policy for partnerships.

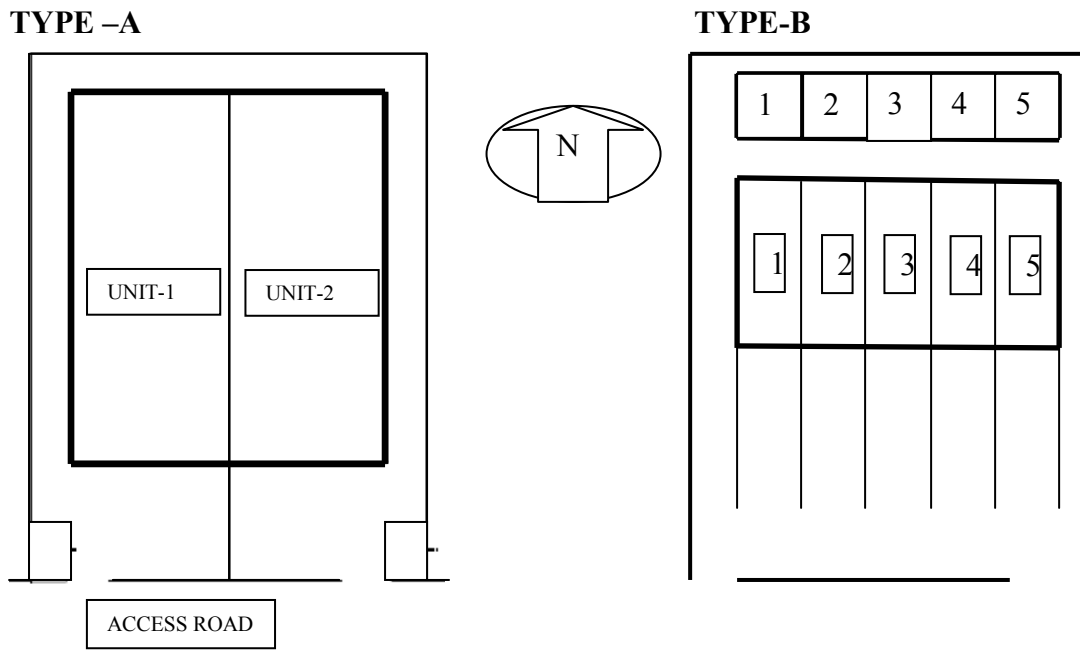
Therefore, two components of partnerships defined by the government policy as follows; the funding for target priced housing and the tenure offered to the private sector partner.

(v) Method of application was defined as follows: An Application form is obtainable upon payment of N50, 000=00 to Oceanic bank plc. A submission of application forms should be accompanied with copy of proof of payment of application fee, company profile, general conceptual description of project, location and size of land required, project costs in term of; land preparation cost, estimates of construction costs, estimates for infrastructure. Sources' of funds, cost of funds including amortization schedule, cash flow analysis, re-payment terms schedule, implementation schedule, breakdown of selling price, evidence of similar projects.

These documents if submitted would enable government part with tenure control in the absence of government supported financing framework through the NHF and FMBN. Since the developer has been advised to seek other sources of funding since government sources were not identified in the document and are practically not available (FMHUD, 2008). There is essentially a divide between the approach of the apex mortgage bank and the apex supervisory ministry for housing. While the apex mortgage bank went through reforms to mobilize funding for households and housing development actors/partners, the apex supervisory ministry for housing accepts no responsibility for funding. This marks a breakdown in the entire enablement framework from conception. Therefore, while PPP may have the potential to bridge the divide, an understanding of its workings as a subsystem of HDS becomes relevant to stakeholders to enable them delineate a sense of clarity in roles, functions, and approach.

#### **4.9 Architectural House/Housing Design typologies for the period under study:**

In figures 4.19, the government established planning-design framework was the single-family house typology. The plot allocation to homeowners was to be a single plot to a single family. From colonial period, sizes of plots ranged from 15m x 30m (length x width) for indigenous neighbourhoods only, while expatriates lived on an acre averagely. There are no direct evidences why the plot size was increased to 18m x 36m for indigenes; but that period was the transition from colonial rule through self-determination and independence and may be attributed in part to the independence of the indigenes in the planning regulation systems that orchestrated master plans. Among most emerging housing development actors/partners of the 1970's, they seemed to favour the 18m x 26m size of plots in Lagos.



**Figure 4.19** Typical adaptive Land Use Concept: Type A is approved plan, and Type B is 5units of terrace housing on same size of plot. This is occasioned by contravention due to constraints in Tenure arrangement- tenure constraints caused by government policy-(Source; field survey, DNL, Architects,2010)

**Note:** Government approved land use concept left; for maximum of two single families per plot of 1000sqm in middle income government layout. Right is a tacit approach by households, developers and experts to achieve maximum use of an expensive land to meet housing demand and accumulate surplus value. (An obvious adaptation from proponents of this land use concept in Lagos; Aradeon, 1981 ,Olusanya,1995) \*land in front of type B is designated for parking two cars per unit of terrace house.

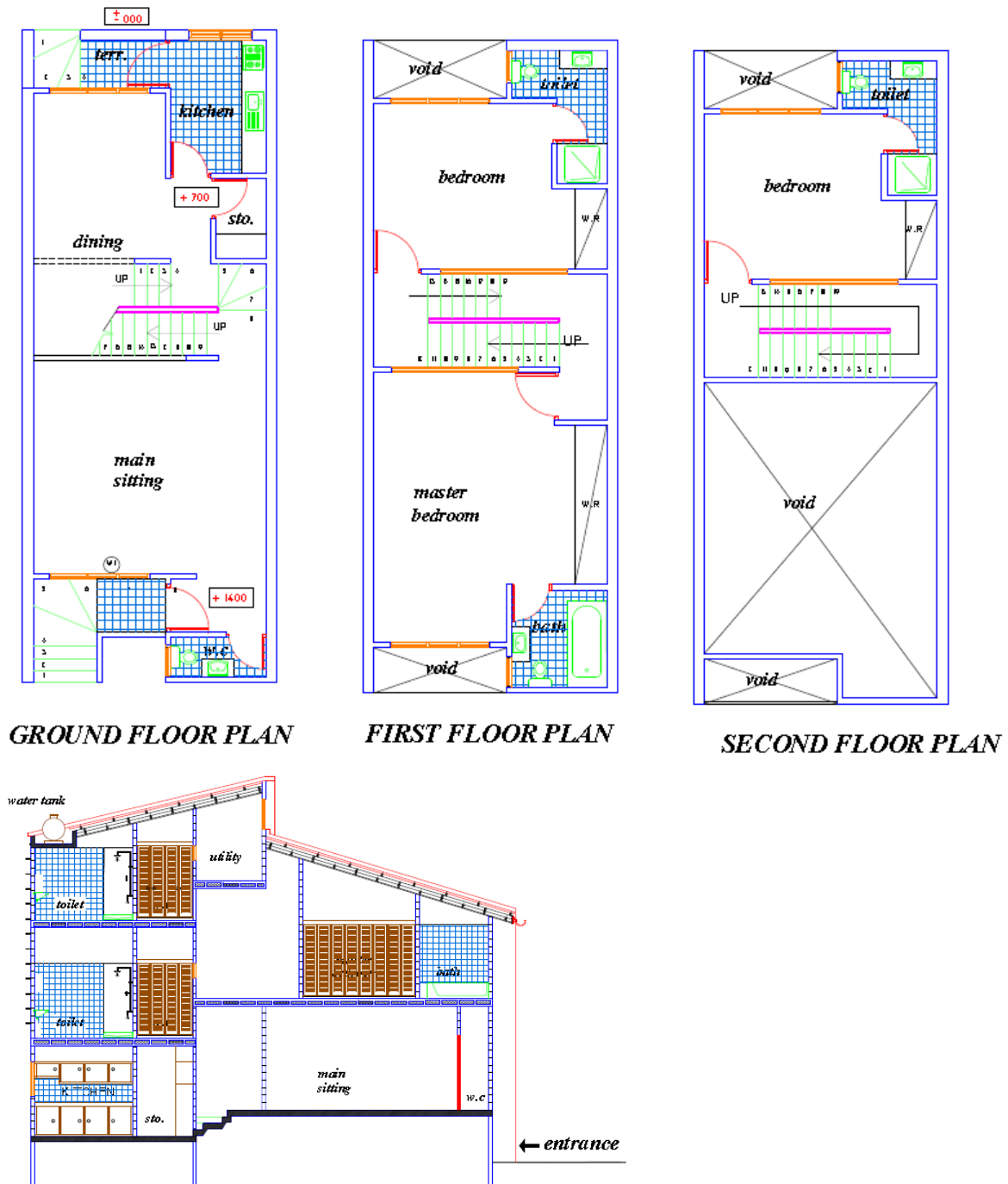
**Figure 4.19B** Street view of Bungalow type housing measuring 15m x 30m in Ebutte Meta, Lagos Mainland.



source [www.nostalgia.com](http://www.nostalgia.com) (Life magazine 1951)

The observations from this study is that the original plot sizes of 15m x 30m catered for a typical housing style for emerging elites in Ebutte-Meta (Lagos Mainland) see figure 4.19B. These were bungalows, and had large sitting room at the front and a hallway with rooms on both sides of the hallway, which leads to the rear as shown in figure 4.18. These rooming apartments allowed for very little increments and only catered for tenants who were at the low

echelon of the emerging working class. They often required a room or two to rent and could make do with sharing toilet and cooking facilities located at the rear of the entire building.



**SECTION Z - Z.**

**Figure 4.19C-Detailed Design to Current Land Use Concept in Figure 4.19:** Typical terrace house. Often used now to increase density on the single family plot; usually between three and six units can be placed on a 1000sqm of land tacitly by professionals and owners.(source,Field survey;DNL architects,2010)

The likely change in the size of the size of plots could be attributed to emerging typology of dwellers that preferred the European styled privacy to housing. The larger plots of 18m x 36m were more spacious and allowed for increased density of two or more families. Sometime blocks of four, six, or eight flats comprising two-bedrooms or three-bedrooms are built on

these plots. The parking facilities for tenants was usually on one side of the land or outside on the streets.

However, with increased development control and government response to contraventions and newer layouts with stricter controls: The average owner is still willing to truncate government policy/regulation to achieve the same objective of increased density discretely. Figure 4.19 shows a typical approved plan and the same size of building redefined internally in reality for terrace housing. While on paper government has approved the drawing on the left, in reality the building on the right was built. Similar techniques are used in confidence between professionals and government agencies to achieve increased density to the detriment of infrastructure and overall government planned objectives.

Aradeon (1999,2005) had indicated the difference between the ‘Tradition space’ and ‘European space’. The only time this was taken into consideration was the ‘shagari mass housing’ during the third national development plan period. Unfortunately, architectural theory was decorative in infusion and the outcome was total rejection of the housing as previously cited. The meaning of ‘traditional space’ remained a ‘space defined activity’ for households, while the ‘activity defined space’ meant European space. Therefore, by defining housing based on activity-defined spaces the realities of use of that space would set in over time for households. One of such realities is the restriction placed by tenure and conformity to planning layout. This simply negates the direct import of the traditional space into a single-family housing concept. Even though Vlach (1984) commended the Yoruba interpretation of the single-family house into the rooming housing typology, this does not hold sway today generally. Since the institutional framework of colonial rule that supported this development is long gone, further, and deeper social needs have been entrenched within the political state. The housing delivery tendency is as observed in the need of households to intensify the density of that single-family plot in an attempt to fulfill traditional needs/functions and obtain economic value as well. This led to the co-existence of different housing types that transcends the pre-colonial, colonial, and post-colonial periods. Attempts have been made to categorize them but this study relies on the classification of Smith (1978) to delineate the architectural typologies using Lagos as the setting for urbanization.

Wilbur Smitt, (1978) in a citywide study categorized existing housing typologies in Lagos as follows:

- Traditional Housing (Rural)

- .Rooming with or without courtyard

-Traditional Housing (Urban)

.Rooming without courtyard; central hall banked by rooms both sides.

-Colonial period housing

.Single-family on one plot(half acre or an acre)

.Multi-family complexes on one plot (1bedroom,2 bedrooms, three bedrooms)block of 4 or 6.

-General Housing types

.Rooming down stairs and flats up stairs (up to 16/18 rooms a block) on single-family plot

.Block of 2,or 3bedroom flats (up to 16flats a block) on single-family plot.

.Bungalow houses in estates;2 or 3bedrooms.

.High rise complexes on larger sized plots up to 20flats(usually for high income groups)

.Detached housing on a standard plot for single-family

.Semi-detached(two single-family house) separated by a common wall(separate drive way or Single drive way).

.Terrace housing(comprising 3 or more single family housing with common walls on a plot or more plots.

The general functional features of these housing varied with the epochs of occurrence. For example, in the early colonial periods, garages or ‘motor house/room’ as it was called was not a functional space until the 1930’s. Similarly, among indigenous post-colonial and modern housing, the garage became a feature in the early 1970’s. It was so standard among the working class that it was a mandatory planning regulatory feature in certain areas of Lagos. However, today this is not the case. The pressure on land development and the need for returns on land investment dictates differently. Most working class would rather park their cars under shading canopies, which are open within the mandatory planning regulatory setback for the development in front or on the sides of the building; and sometimes on the street.

In addition, during the pre-colonial and early colonial period the kitchen was external (but integral to the dwelling unit) for all housing types, traditional and European. This is due to the use of wood for cooking among indigenes and the use of a cook (usually an indigene who is not part of the European family) among expatriate workforce. Post-colonial period experienced an integration of the kitchen into the dwelling unit as an activity-defined space and internalized based on European standards. This became a common feature for the emerging working class; other activity-defined space such as dining was incorporated. However, previous studies showed that culturally the middle-income working class did not eat in the dining room rather



they performed such functions in the lounge/living room on regular couches (Aradeon,1999). Cloakrooms and entrance hall became obsolete from colonial housing, as most working class could not relate with the function associated to such spaces. Traditional dress code did not allow for the use of cloakroom by the entrance door and is still not a functional part of our culture in one hundred years of colonial experience. However, the servants-quarters (boys'-quarters) tradition remains an attractive solution to a culture of live-in helpers and domestic workers among elites of all classes (house helps, drivers, gatemen, sometimes adult children, relatives, etc).



**A**-Traditional housing old city.



**B**-Lagos state millennium housing estate, new city

**Figure 4.20 Housing typology;** nucleated development of the old city(A) as different from a clearly defined new city (B).Source;[www.blogspotlagos.com](http://www.blogspotlagos.com)

Figure 4.20 A and B are both parts of Lagos. The traditional city shows intense housing development through individual effort. The commercial precinct(market) is shown with the low pitched roof while residential buildings closely nested mid-rise building above the market up to four upper floors are residential rooming apartments and their ground floor used as shops (an introduction of Afro-Brazilian architecture to Lagos and the rest of the country). The Millennium housing was a designed estate for the middle-income group by Lagos state. An estate gate and fence in front defines the community as separate from the larger city. The layout is more defensible with a greater sense of community. Households and housing development actors/partners and experts are faced with this duality in initiating housing programmes. Either they obtain rights to redevelop the old city through families or the old colonial GRA's through government or sand fill a new land and develop a nucleated estate. The use of nucleated estate currently serves a social and security functions. Areas of the old city where communities are ill defined have resorted to gating their streets to reduce the anonymity associated with the city and to delineate the community within the beehive of the rest city dwellers.



Block of 4flats-3bedroom, FHA housing Abesan estate, Lagos.(gated community)

**A**



LSDPC Medium income housing, Agege,Ogba dairy farm, Lagos

**B**

**Figure 4.21** Two types of blocks of flats: Type-A,built by FHA and type-B built by LSDPC. Source:www.lagosstate.com

From figure 4.21, the type A is an FHA typology based on nationally perceived demand pattern as prescribed by housing development experts at the national level. Type B is an LSDPC typology by housing development experts originating from their perceived demand patterns. The national level conception of housing obviously inundated by their burden and preference of standards influenced by lush colonial conceptions, architectural solutions emanating from Lagos is more responsive to the increasing demand and the need for densification. Fry and Drew (1956) indicated this possibility in the future by local professionals who would have a better understanding of the lifestyle and needs of households.



**A**



**B**

**Figure 4.22** A- single family house in government layout and serviced by government; B-single family house in private layout serviced by private investment.

Source:www.realestateadvisor.com

Both housing in figure 4.22 A and B are middle-income layouts by public and private sectors. The architectural characterization mimics similar colonial styles, which is reminiscent of that period showing a preference for the physical qualities of that era. Most households that have

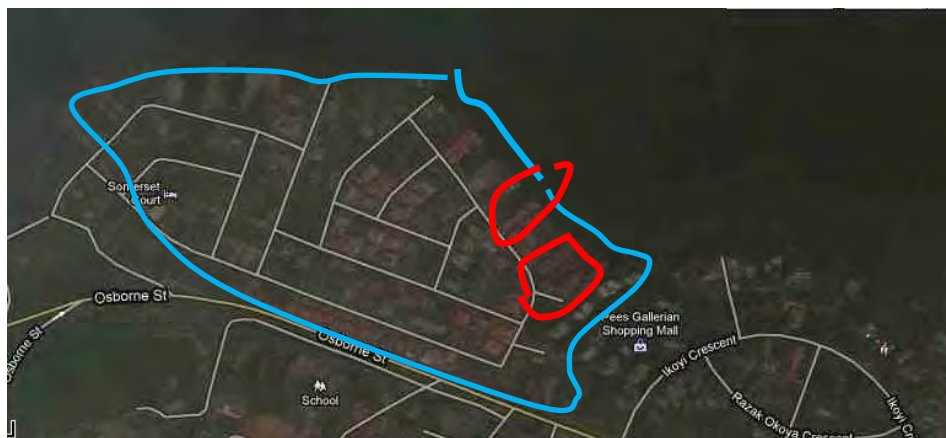
access to government and private site and services often demand features like; colonial pitch roofs, colonnade, arches, and the likes as this outlook is visually institutionalized in their mindset and connotes aesthetic beauty. This study from the interviews observed that among the rich and middle-income constructing ones house is a mark of social attainment as against buying already built house. Most households interviewed rented or purchased already built houses as a temporary relief.

The emerging estate concept for housing is defined by estate size, housing typology that optimizes the land area relative to profit motive and the target household as end user who is succinctly defined by income. Figure 4.23 shows a high-class Ikoyi type terrace house. They are terrace typed housing built on a standard one-acre plot of previous colonial housing. The conception is a small estate within a larger estate as in figure 4.23, 4.24 and 4.25. However, the target households would rather have distinct units, which serve their functional use of space rather than the wall-to-wall terrace housing that is associated with the lower income groups.



Typical estate of up to 20-single family terrace housing on 3-floors are often a development model among private developers in increasing the density within government layout: A gated estate within a government estate layout. Osborne phase-1, ikoyi

**Figure 4.23:** Shows typology of housing estate within a public estate; based on classification of Smith(1978)colonial-present day. sources (field survey and internet sites of housing developers)



**Figure 4.24** Marked in blue is Osborne estate and marked in red are estates within the larger estates of between 5 and 20 housing units;(a typical private development within government layout) source:wwwgooglemap.com



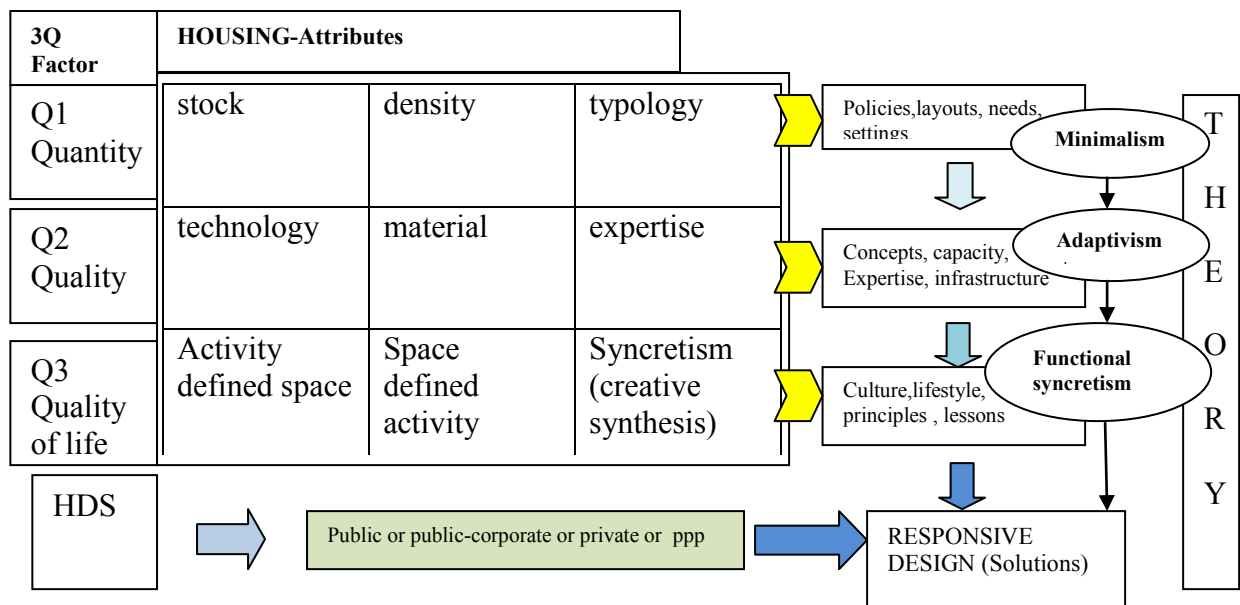
**Figure 4.25** Differential development within an estate: Marked in Blue is a developed single-family Plot of land of about 2000 sqm, in yellow is a vacant land undeveloped while in red is a privately developed estate within Osborne estate as shown in figures 4.23, and 4.24 above. (source: [www.googlemap.com](http://www.googlemap.com))

From the above illustrations which traces the transitions from native settlements and housing through the colonial and post colonial housing typologies until date it is evident that architectural theories are emanating from the traditions of each epoch. The role of architecture in function as derived from the domestic essence of lifestyle and the expressed aesthetics has evolved in the last one hundred years of housing in Nigeria and particularly Lagos. Maxwell Fry (in Okoye, 2002:123) asked, ... *‘on what would it (Nigerian aesthetics) be based that is as solid as that on which Aalto’s Finnish tradition or Tange’s on the Japanese tradition was?’* Aradeon (ibid) insist that... *‘We must...draw on our traditions’* while Joubert (ibid) was incisive when he said.... *‘good and upcoming architects are coming to terms with the fact that they live in Africa...you need to look at what is indigenous...’*

While the finite terms of architectural theories may not be as obvious, delineating architecture from lifestyle would give the needed credence to the development of traditional theories often ignored. Aradeon (2005:59) observed that *‘culture and lifestyle are the critical elements for creating space and house form that is sympathetic and relevant to our environment’*.

To understand the delineation of architecture from lifestyle, this thesis identified sets of attributes of housing thought to influence the development of architectural theory in Nigeria with particular reference to Lagos. By using housing as the metaphor, the quantity of housing, quality of housing and the quality of housing environment that reflects lifestyle shapes the architectural theories emanating from the understanding of the syncretism. This research identified this tripartite attribute of housing as the universal objective and called it the 3-Q factor.





**Figure 4.26** Evolution of Architectural Design theory and concept in Nigeria from attributes of the Universal Objectives of Housing (source-Author)

From the above historical analysis of HDS through policy epochs, figure 4.26 is a general overview of design synthesis. This reflects the architectural theory behind housing in Nigeria. It is principally responsive to key principles of minimalism, adaptivism, and functional syncretism. Whereby, syncretism had been defined elsewhere in this work by Rappaport (1983), as ‘creative synthesis’ and by Aradeon (1991) as a hybrid of lifestyles emanating from tradition, Islamic and European influence. The evolution of this theory is such that ‘copying’ of international trends in design is in direct relationship to outcomes of responsive design solutions that shapes the Nigerian architecture. This is unfortunately inevitable since the template from which architecture in housing is established is defined by the universal objectives of housing and the HDS option.

#### 4.10 Delineating lifestyle from these periods with architectural typologies

The traditional house form of the pre-colonial period was principally communal, and it grew in most cases as the need arose to cater for more members of the family within the socially acceptable nucleus as maybe interpreted by various communities.

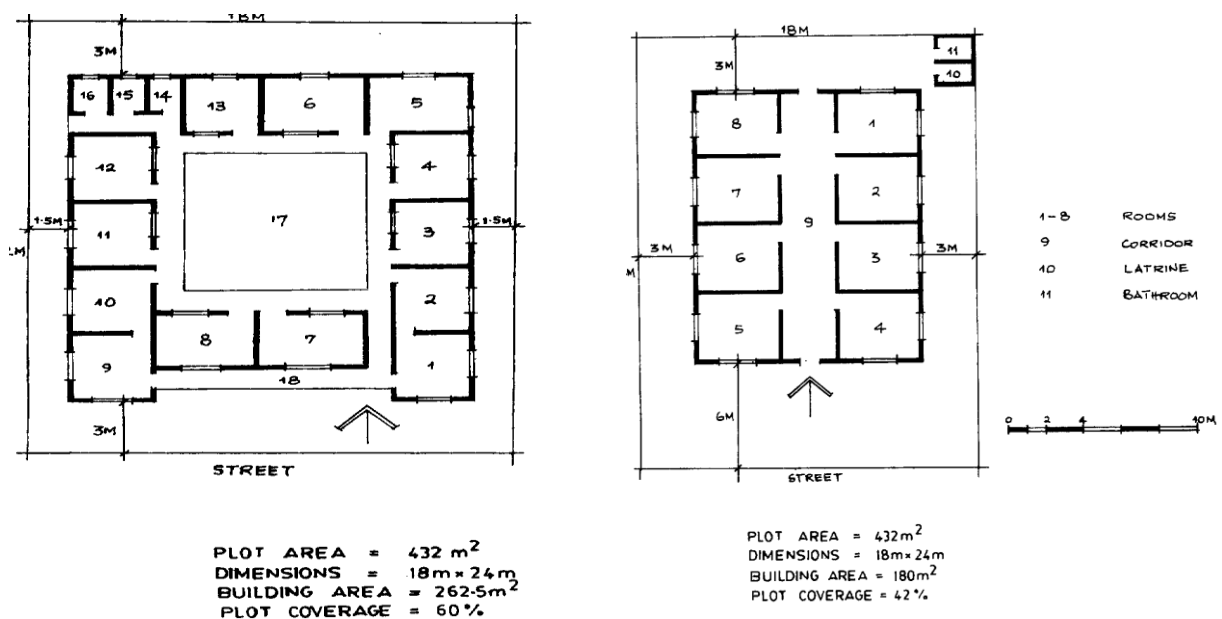
However, the single-family house of the colonial/post- colonial period contributed to the obsolescence of the traditional communal-house form and to a degree its lifestyle. The single-family house form became a symbol of credit worthiness for indigenous merchant class, government employees (popularly known as *civil servants*), and the working class after the European colonization (Aradeon, 1991). The space and codes of the single-family house typology has undergone various indigenous cultures with specific value systems in urban administrative and commercial centers like Lagos. Two broad based house forms that are

traceable to the evolution of the Nigerian urban center have been identified as the courtyard house form and the single-house form (Aradeon, 1991:93);

*The court-yard expresses dualism: the individual conjugal family unit, separate but still part of extended family group, a socio-economic unit whose resources are based on the land. Two type of functional spaces are defined; the bedroom for sleeping and the courtyard space for individual and complex group activities (that is, activity defined space).*

*The single family expresses the nuclear conjugal western Christian values, within the subdivision of lot controlled by planning and building regulations, it creates nucleated left-over outdoor spaces; the front yard and the back yard within a walled enclosure that emphasizes the singularity of its social structure (which is, space defined activity).*

The transition from traditional to colonial in urban settings is evident in the layout typology earlier discussed as village setting and government setting (planned layout of gridiron). However, among the early traditional response to urbanization was the transition of courtyard housing into rooming as in figure 4.27A, based on unrestricted layouts cut out from family land within existing villages that were at the verge of been engulfed by the city as previously shown in figure 4.13D. However, with the advent of planning regulations and more legislation on tenure, the sizes of land became smaller and the typology of housing became minimalist in character and approach. The courtyard for formal development disappeared from the allocated single-family plot of land.



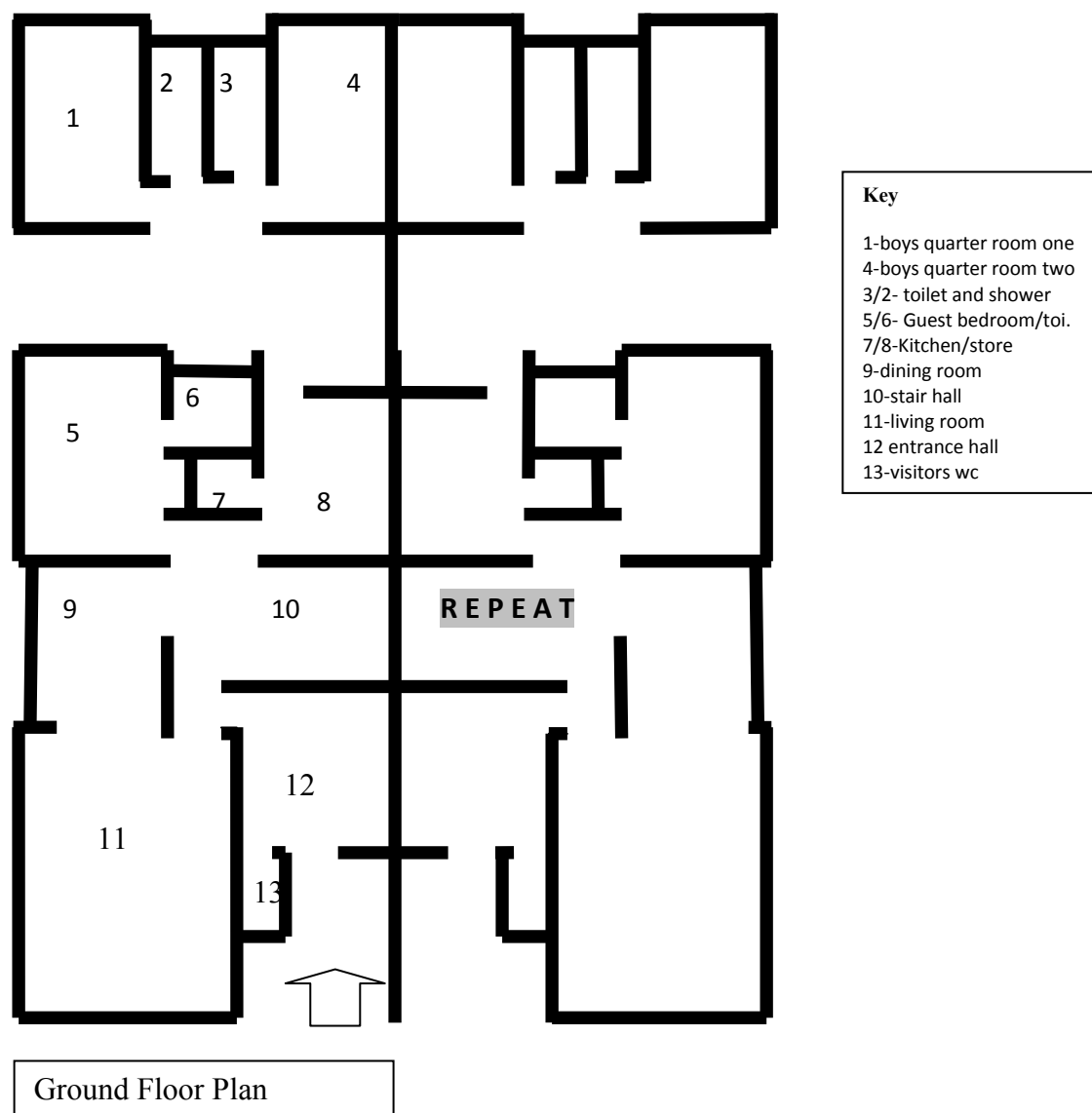
**Figure 4.27 A-** Rooming housing variations: Plan left-courtyard type, internalized services: **B-** Plan right-Corridor type, externalized services. (Source Ikejiofor, 1999)

The corridor (or hallway) type rooming housing became more functional for urban households as shown in figure 4.27B. The influence of these house forms and spatial use transcends the

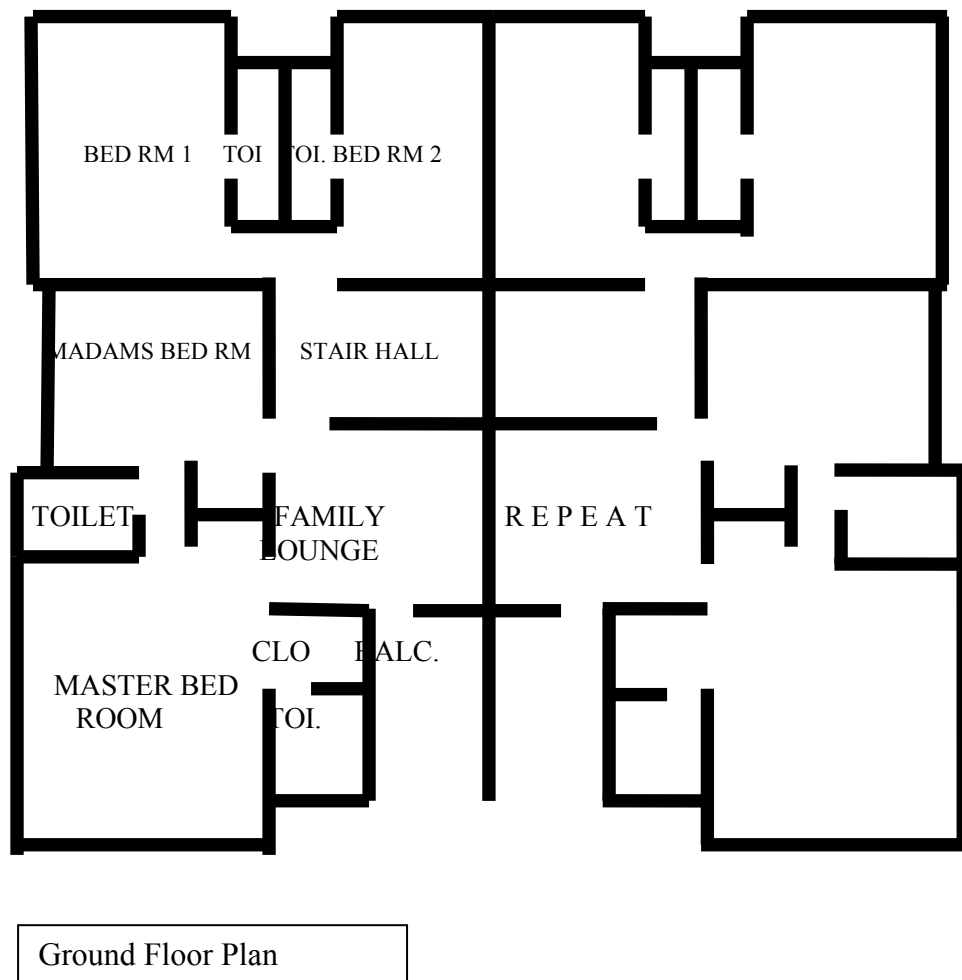
new lifestyle; a minimalist approach to form and function based on resource and process optimization by households, housing development actors/partners, and experts.

Rapoport(1983 ) and Aradeon 1991), referred to this lifestyle of syncretism (creative synthesis) in this case a product of the European Christian living standards, British colonial rule and traditional African values. This conundrum of ideology remains a major concern for prescriptive housing in most urban centers in Africa like Lagos.

However, the colonial housing schemes (as seen in the European reserved areas/government reserved areas, GRA's) reflected an interpretation of imperialist lifestyle against the backdrop of indigenes whose lifestyle was termed inferior.



**Figure 4.28-A** Typical Detached house for middle-income owner's; Personal funds and Bank financed house for a banker (circa, 2005; source, field survey, DNL architects, 2010).



**Figure 4.28-B** Upper floor to typical detached house Figure 4.27-A

The Boys' Quarters in figure 4.28-A is located at the rear as detached building from the main building comprising two-bedrooms and conveniences. The ground floor of the building also has a guest room. These are standard features among indigenous middle-income and expatriate housing in Lagos.

The advent of the twentieth century modern architecture amplified this position by coining the term 'tropical' as descriptive to the tenets of architecture for the tropics with a strong dialect of modernism carefully infused as the standard for acceptance in all public works and by default the private sector. Aradeon(1991) describes it as an 'instrument of introduction to European life and thought'. This was strongly predicated on public funding for food, car imports and social values strongly identified with the single house and all it stands to represent (Hunter,1981).



Another variability of the single-family house is in the spatial definition. It is evident that western definition of the parlour, (or sitting room/living room), dining room and kitchen among building types (bungalows, flats, duplex, villa etc) within controlled lot (plots) does not produce the uniformity which typifies western neighborhoods. At best, these spatial definitions only create reference places within interchangeable and variably defined human activities. These may be interpreted by western researchers as eclectic or eccentric but they remain pragmatic and appropriate to the user culture (Aradeon,1991).

Therefore, the single-family house culture is predicated on a single culture assumption, which is far from the reality of most cities in Africa and particularly Lagos. Aradeon (1991:96), surmise as follows:

*'The non-homogeneity in perception, use and understanding of borrowed cultural forms conspire to produce a visually chaotic neighbourhood of intense human activities. To a casual visitor and the assimile,the neighbourhood lacks visual order,but within the culture of the user ,the underpinning human social relationship is ordered at several levels.'*

Then, by institutionalizing a housing policy for all through public-private participation predicated on the single house form as the object of delivery is faulty. The reasons for this aberration in planning and design are identified below:

- There is a yearning for activity defined spaces culturally while space defined activity is designed for household consumption at the design and planning levels. The users would distort such containment of spatial freedom akin to lifestyle consequently.
- There is the misnomer of target price regime, which socially delineates all beneficiaries as homogenous in culture and income. By so, establishes a profiling mechanism for defining households' housing demand and actors/partners supply.
- The definition of housing environments strictly on the single-family house form configuration based on deployment of massive infrastructure services for a massive population. Whereas in reality housing development remains nucleated and growth pattern is nucleated; which is supportive of the lifestyle of household communally.

In Lagos the interplay of four important factors have been identified as contributory to the conflicts between the single-family house prescription inherited from the colonialist and

traditional house forms in terms of design and lifestyle namely; the land use system, the land use design, the variable factor of spatial use and physical control (Aradeon 1981).

The variable factor of spatial use is defined as; the interpretation by households of space/spaces conditioned by planning layouts. These layouts are pre-determined primarily by access for cars. This lifestyle theory is rather presumptuous of the fact that all single families should own a car or have access to automobile (and if not aspire to have one).

Therefore, when providing housing for a lifestyle whose economic benchmark does not afford them the luxury of cars, it becomes impossible to achieve such planned objectives in terms of spatial configuration and fixtures. Since desirability may not always add up to affordability. Therefore, the basis for syncretism in government policies for planning and design is 'desirability' rather than the 'realities of spatial use'. The consequence of various levels of coalitions among actors organization is reflected in the emerging lifestyle that are expressed in such housing schemes. In the last fifty years such mass housing effort and typology is simply desirable, the cost of actualizing it remains elusive to many developing countries with particular reference to Nigeria. The urban centers suffer the most as this creates subsystems for housing delivery sometimes unknown/alien to the institutional arrangements.

#### **4.11 Defining the institutional and organizational arrangements**

Diagnostic studies by housing experts attribute the shortage of housing to inadequacies in characteristic of the housing delivery system, particularly the weakness of the housing finance mechanism occasioned by the reliance on depository arrangements particularly the NHF (Mabogunje, 2007).

In addition, the lack of mortgage friendly legislation (like restrictions on mortgage transaction through the land use-act; use of governors' consent to validate all transactions): Given the volume of transaction and associated prejudices with such vested powers.) By examining these characteristics there is a likely emergence of typical trend, which will more precisely define the needed parameters for institutional and organizational arrangements.

The institutional arrangements in the housing delivery process created the rules and the framework for actors/partners interaction towards the pursuit of objectives, which in turn creates the needed opportunities at the societal level. These institutions have been identified as (but not limited to) key stakeholders such as, Federal Ministry of Housing and Urban Development, states government, local councils etc. This research observes that, in the

government publication both institutional and organizational actors/partners were joined together (FGN,2008).

The organizational arrangements' in turn takes advantage of these societal opportunities by forming coalitions. These organizations have been identified as (but not limited to) private sector operators (Mabogunje,2007), such as; the Mortgage Banking Association of Nigeria(MBAN), and Real Estate Developers Association of Nigeria(REDAN).

It is evident from the foregoing all actors have equal powers in the housing process theoretically; however, as organizations pursue their perceived opportunities they tend to incrementally alter institutions to achieve their objectives. Therefore, as institutions create the rules, organizations in turn form coalitions that have the propensity to alter the dictates of the institutions.

In Lagos, this is evident in the hierarchy of institutions namely, the federal government, the state government and the local councils. The third regulatory level is directly at the point of implementation of policy; through local planning authorities (controlled and dictated to by the state due to weak framework for implementing democratic governance).

Currently, when federal government land is acquired for public-private housing development through PPP the actors/partners could face been denied planning approval or developers are requested to apply for fresh title documents issued by the Lagos state government. This is in a bid to extort more development levies from developers of such landed property that would accrue to the state treasury. The state government claims a landmark victory over the federal government at the Supreme Court on jurisdiction and powers over land. Table 4.8 shows the cumbersomeness in sourcing land and obtaining development rights in Nigerian cities with particular reference to Lagos.

The stage activities are disparate in nature; all 32 stages' are not necessarily related at the institutional and organizational levels. For instance, stage one; 'search for a qualified estate agent or local land dealer'; the estate surveyors and estate agents are two independent bodies. The surveyors are backed by an established decree while the estate agents are not and are not necessarily trained professionally to perform their function institutionally. The estate association is not recognized by law and organizationally weak. More so, the estate surveyors are unable to comprehensively approach and organize the real estate market. Therefore, independent individuals take economic advantage of the booming market to create their real

estate search platform independent of both the estate surveyors and agents' organizational framework. Such social complexity makes initiating the process cumbersome and susceptible to touts and fraudsters taking advantage of unsuspecting prospective homeowners (who want to buy land or buy a house).

**Table. 4.8** Key stages/estimated time for sourcing land and development rights in Nigerian cities

| No | Nature of Stage Activities  | Time (Days) |
|----|---|-------------|
| 1  | Search for qualified estate agent or local land dealer by land buyer  | 7           |
| 2  | Identify a number of potential sites  | 30          |
| 3  | Choose a specific site  | 7           |
| 4  | Establish contact with landowner  | 7           |
| 5  | Payment of commission to agent  | 1           |
| 6  | Payment to landowner  | 1           |
| 7  | Search for registered landsurveyor  | 7           |
| 8  | Survey of plot by surveyor  | 7           |
| 9  | Search for a qualified lawyer   | 7           |
| 10 | Preparation of land documents by lawyer   | 7           |
| 11 | Preparation of agreement /power of attorney between land owner and land buyer in the presence of witness  | 7           |
| 12 | Registration of land documents at state lands deed land registry  | 30          |
| 13 | Secure tax clearance  | 7           |
| 14 | Obtain application forms for certificate of occupancy( C of O)  | 3           |
| 15 | Make a formal application for C of O. by completing and submitting forms to(SLUAC)  | 7           |
| 16 | Payment of approved fees  | 1           |
| 17 | Issuance of C of O(formal land rights)by office of the State Governor   | 180         |
| 18 | Deposition of details of plot at land registry  | 1           |
| 19 | Search for registered architects/engineers to produce building/structural plans   | 7           |
| 20 | Production of appropriate plans and drawings by registered architect and engineer   | 7           |
| 21 | Search for a registered town planner to produce site analysis and EIA reports of proposed development   | 7           |
| 22 | Production of appropriate site and EIA reports by registered Town Planning  | 7           |
| 23 | Obtain application forms for planning permission(development rights)  | 3           |
| 24 | Submit completed applications forms along with supporting documents(c of o) building plans, site analysis and EIA reports(complete dossier),to local planning authority(LPA). | 1           |
| 25 | Payment of approved fees  | 1           |
| 26 | Assessment of submitted dossier by LPA  | 7           |
| 27 | Inspection of submitted dossier by LPA  | 1           |
| 28 | Preparation of reports by LPA on site visit   | 7           |
| 29 | Assessment of dossier by the engineering department   | 1           |
| 30 | Assessment of dossier by the health department  | 1           |
| 31 | Reports from engineering and health department submitted to LPA   | 7           |
| 32 | Final approval of the planning application and issuance of formal planning permission(development right)by chairman LPA   | 7           |
|    | Estimated time to secure formal right to use urban land in Nigerian cities  | 381 Days    |

Source;Egbu,Olomolaiye,Gameson(2008)

#### 4.12 Summary

Historically, housing in Nigeria has gone through three major epochs, six policy phases, and three categorical transitions. The major epochs are; pre-colonial, colonial and post colonial. The six policy changes are the first to fifth national development plan and the post democratic period from 1999 until date. The three categorical transitions are seven economic transitions, two architectural transitions (which is the basis of architectural theory) and two social transitions from which this research delineates institutions and organizations alongside architectural typologies.

The seven economic transitions are, a period of selection (expatriate and a few local housing), funding (NBS, and government investments into formal financing), subsidy (government direct financing of housing through agents and housing provision for employees massively), allocation (government provision of sites and services and land grants), target cost (government resort to profiling of household beneficiaries), contribution (national mobilization of NHF) and finance mobilization (capitalization, bonds/securities for housing finance).

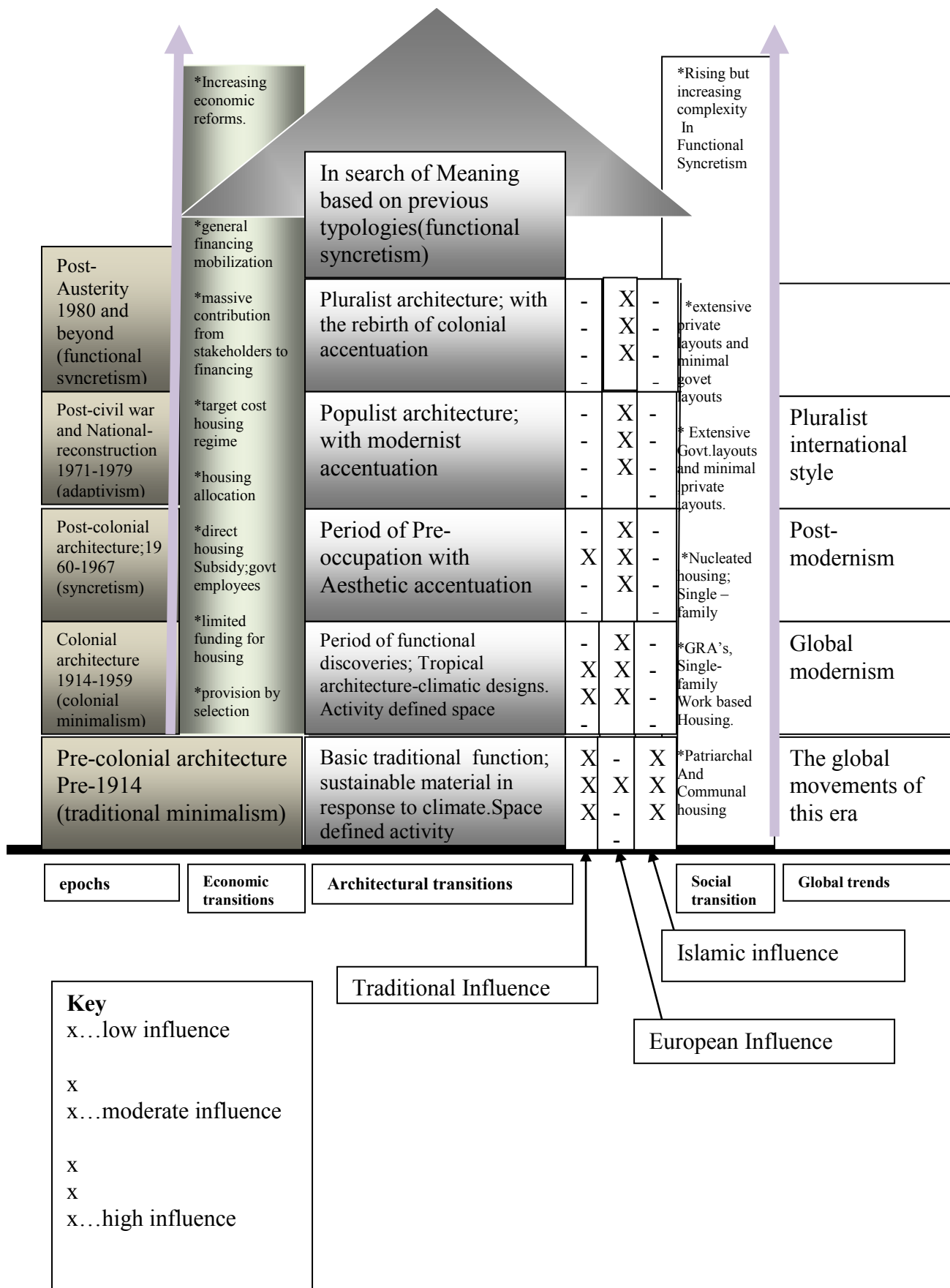
The social transitions were firstly a transition from traditional/communal settlements to GRA's for a select few and secondly, a cycle of multi-nucleated communities (comprising traditional, GRA and estate settlement alongside the emerging integral fusion of the city). However, the architectural transitions were from the traditional to colonial and from the colonial to syncretism.

Currently a functional-syncretism akin to deconstruction, post-modernism and the international style would describe the theoretical synthesis to design. Rather than just a creative synthesis, or a hybrid; design is more or less the use of minimalism and adaptivism as the basis for functional creativity. Table 4.9 is an historic overview with comments drawn from the review of literature and observation from field study. This shows an increased appetite for Eurocentric lifestyle and housing in relation to the new work ethics as population increased. To this extent, the demand for single-family housing increased while architectural design framework provided by supervising institutions remained largely static; current reviews by government of planning and design does not provide architects with the needed flexibility and dynamism in response to functional needs, technology improvements and increased population and demand for single-family housing. However, the Social and architectural transitions are described in Figure 4.29. This gives an indication to the development of architectural theories locally in

response to global trends. A perfect template for minimalism, adaptivism within functional syncretism as observed.

**Table 4.9 Overview of Housing Conditions Based On Historic Base Line of This Study**

| S/N | Epoch                               | Policy   | Institutional Arrangements   | Organizational arrangements  | Outcomes   | Comments   |
|-----|-------------------------------------|--|--|--|--|--|
| 1   | Pre-1914 Period                     | Traditional Housing  | *community heads<br>*priests/master builders   | *Family & Friends<br>*Extendablehouse  | *Courtyard compound<br>*Nucleated community<br>*use of local materials<br>*housing was community based problem   | -population of Lagos(74,000)<br>-cognitive housing policy  |
| 2   | 1914 Colonial Period                | Target Housing<br>*Expatriate housing  | *Colonial govt.<br>*Euro-masons  | *Contrcators<br>*Single-family house   | *delineated govt layout/plotsize<br>*crown property rights<br>govt layout/plotsize<br>*crown property rights<br>*onset of imported building material<br>*expatriate housing/handfull indegenes<br>*evolution of courtyard housing into rooming | -population of Lagos(100,000)<br>-colonial housing policy for workforce only   |
| 3   | 1914-1956 Colonial Period           | Target Housing<br>*Expatriate housing<br>*emerging SFG                           | *Colonial govt<br>*PWD<br>*Brazillians,Cuban ,Saros  | *Contrcators<br>*Master Builders<br>*Communal Living adapted to rooms  | *govet planned layout (GRA's)<br>*Housing delineating elite status<br>*private planned estates<br>*integrating lifestyles<br>*evolution of rooming housing   | -Population of Lagos(950,000)<br>-integration of British and traditional building regulations;class ification of towns,and emergence of tripartite architectural typology:Europe an,afro-brazillian and syncretism.                  |
| 4   | 1956-1976 Self-Rule                 | *Govt.policies/criteria<br>*SFG Housing criteria                                 | *NBS<br>*Standard Setting<br>*Regulations  | *African Staff housing<br>*onset of surplus value accumulation<br>*Housing corporations to achieve SFG Objectives  | *rapid housing dev. On target basis<br>*urban renewal<br>*intl.funding<br>*new towns dev.<br>*syncretism<br>*MHO<br>*increased surplus value accumulation by private sector  | -Population of Lagos(1.5m)<br>-Lagos center of commerce<br>-poor regional networks<br>-emergence of local professionals<br>-onset of breakdown to instituional capacity  |
| 5   | 1976-2010 Towards comprehensiveness | *Urban housing policy<br>*Rural housing (a failure,1979-1983)<br>*Social housing | *Fed.Min. of Housing<br>*State Min.of Housg.<br>*LGA(no specifics)<br>*FMBN,PMI's,NHF,RE DAN,BMAN,<br>*Review of Land rights | *estate development<br>*developer contractor<br>*contractor financing<br>*land allocation<br>*densification of GRA's<br>*Imported bldg material<br>*Increased rooming housing<br>*consolidating syncretism | -nucleated city<br>-poorly developed precincts<br>-high contravention on building regulations<br>-lack of comprehensive housing strategy<br>-multiple housing and regulatory institutions  | -population of Lagos(15m)<br>-Lagos mega-city<br>-weak state development control<br>-rapid estate development<br>-maasive imports of building materials<br>-poor planning<br>-PPP suits surplus value accumulation by private sector |

**Figure 4.29** Highlights of Historic transitions; Economic, Social, and Architectural (Author)

## **CHAPTER FIVE: OUTCOMES OF POLICY APPROACHES**

### **5.1 Introduction**

There is clear evidence from the preceding chapter that as historic conditions changed, architectural typology changed in form and function from the traditional to the colonial and into syncretism. The social transitions from a few strong communities to multi-nucleated communities established anonymity and created a social divide among households. Therefore, the nucleus of cities (which should form the downtown as it obtains in the west) faced neglect and it became the nucleus of urban blight. It is from within such emerging social structure the middle-income group took its origins and grew its capabilities towards achieving their housing aspirations.

However, the middle-income group soon became the acceptable benchmark for delineating lifestyle across the national regions and this group informed the institutional framework for housing development and formed the basis for organizational coalitions among social interest groups. What they accepted became the norm in both policy and design. Since they have become a formidable social pressure group even though they are not as organized as expected formally.

Unfortunately, the national framework for housing delivery experienced seven economic transitions described in Figure 4.29 by government through disparate policy machineries, which transcends the entire period of study. The outcomes are discussed below.

### **5.2 Consequences of Policy changes in these periods**

The shortage of decent and affordable housing in Nigeria current stands at 12-17million units of single-family housing (Mabogunje, 2005, 2007). This housing deficit is at an average occupancy ratio of six people per household (FOS, 2004; NBS, 2007). Consequently, this translates into 72-102million Nigerians without housing; going by the deduced estimates cited above it is utterly alarming. This study challenges such inaccuracies from published works. From the literature in previous chapters an individual such as a relative, house-help, driver, or gardener is usually a part of that count, whereas he/she came from another home where housing is adequate at his/her level of subsistence. Hence, a translation into Multiple Home Ownership (MHO) that is common among the middle-income in Lagos; ownership of a home in Lagos and the village are part of planned objectives of households but entirely never referred to by any government policy. This housing aspiration has grave consequences on the overall outcomes of housing objectives by government tacitly. The village/country homes are often vacant and borne out of social reasons such as status in society and the need for



representation at the three tiers of the national political structure of the country. Therefore, the rationale behind such estimating and the methods used could not be accurate. The inference then is that 50% of Nigerians lack housing and this statistics is unrealistic and misrepresentative of the actual situation by policy. This tacit policy framework is to attract state financial allocation to regions rather than policy orientations towards solving the housing problem.

The consequences of such target estimating and extrapolation is that government is perpetually under pressure to keep spending in the wrong direction without addressing the issues this research considers as realities in the housing delivery systems.

There is also the shortfall in the needed housing capital requirement, which is the basis for local and foreign lending which is a lucrative avenue to fueling corruption among politicians and government employees. Financing need is between N31 Trillion and N44 Trillion, given 12-17million units at a rate of N2.6million per unit; based on target cost projection, Mabogunje (2007). The entire national budget is below 20% of such estimated financial projection and further reinforces the unrealistic extrapolation of the housing need.

Secondly, there is the inability of the housing sector to serve as a catalyst to improving national GDP given the enormous financial injection into that sector in the last ten years. From Table 5.1 it is evident that the direction of expenditure is not in line with the realities of housing needs and effective demand. Factors such as title deed, affordability and repayment are topmost in lenders requirements (Ojo,2004). This means the fulfillment of these criteria's by beneficiaries (households and housing development actors/partners) is essential to accessing funding from PMI's through whom government disburses subsidized financing.

**Table 5.1 Factors determining access to mortgage in Western Nigeria**

(Western Nigeria comprises-Lagos,Oyo,Ondo,Osun,Ekiti, and Ogun states-see map of Nigeria)

| Factors (Lenders requirements)             | Proportion % | Ranking of factors(lenders requirements) |
|--|--------------|--|
| Collateral(title deed)                     | 85.6         | 1  |
| Affordability criteria                     | 68.2         | 2  |
| Repayment schedule/criteria                | 65.2         | 3  |
| Mortgage protection policy                 | 58.4         | 4  |
| Fire insurance policy                      | 56.4         | 5  |
| Amortization period                        | 55.1         | 6  |
| Down payment(equity)                       | 53.1         | 7  |
| Building plan approval                     | 52.1         | 8  |
| Service chsrge(inspection and search fees) | 47.5         | 9  |
| Age of account with lending institution    | 46.2         | 10                                       |
| Current tax clearance certificate          | 42.6         | 11                                       |

Source;Field survey in western Nigerian cities,2003(Ojo,2004)

Thirdly, the conception of PPP was to promote housing delivery nationwide. However, the framework for the current housing reforms is for the prosecution of mass housing production through public private partnerships at a subsidized cost by government granting subsidized land and financing theoretically. Unfortunately, the housing finance system was the premise for critical success and the financial model based on the possibility of strengthening the financial subsystems in the following ways:

- (i) Discharge of secondary mortgage and capital market operations by the FMBN. (Hence a change from total reliance on depository finance system to a capital market funding system)
- (ii) The Provision of guarantees and other incentives by the FGN for FMBN securities
- (iii) Mortgage loan origination by banks and PMI's
- (iv) Institutional investment in mortgage loans by banks, insurance companies
- (v) Establishment of mortgage enabling legal and regulatory frameworks
- (vi) Target priced-mass production of decent and affordable houses by the private sector through synergies between the housing producers and building material producers anchored on improved liquidity in the mortgage markets. The implication is that this accentuates the commercial significance of housing value. Since 'access to financing' requires a proof of financing capability for housing development actors/partners and similar proof is required from households. Those who have the required eligibility criteria proofs would experience better success and trade with their housing outcomes, such as allocation letter and title deed to re-sell at higher prices and access at subsidized prices. This is in direct conflict with the policy objectives, aimed at creating an enabling environment and establishing that marketable instrument could demonstrate that housing has the capacity to improve the social well being of society and in fact the GDP (Desoto, 2003).

The fourth consequence of policy changes is that the factors, which cause ineffectiveness of government policies, became less the focus and so remained as underlying impediment to proffered housing programmes. Awotona, (1990) identified ten-major factors among others responsible for the overall ineffectiveness of public housing policies and government programmes (1970-1980), and they are still relevant today since the policy changes have done very little to improve these factors:

- Problems posed by the systems of land ownership and tenure.
- Poor construction and building material industry
- Lack of adequate technical and management power
- Lack of attention to the housing requirements of rural Nigerians

- Poor housing statistics/data
- Inadequate assessment of housing needs and poor information on housing.
- shortage of developable land (within proximity of existing facilities)
- Multiplicity of bodies concerned with policy and programme formulation and implementation.
- Lack of incentive for the private sector
- Inadequate housing finance.

The extent to which the policies of the last ten years have addressed these issues remains a subject of debate as major policy shifts have occurred yet it is difficult to identify the direct positive influence on the housing delivery process and how it has been overhauled.

The cumbersomeness associated with accessing housing finance and home ownership remains a sore point for the emerging middle to low income groups; especially the middle-income groups whose effective empowerment is the needed social indicator for national development (FGN, 2003; NBS, 2009).

The fifth consequence of policy changes is that technical reviews remain inundated with the problem statement rather than critical questions and answers that directly address the housing situation. The outcomes remain political sentiments often achieved by profiling the entire country on a single-family delineation and target-cost objective. For example, the official document (FGN, 2003) on the President Obasanjo reforms (1999-2007) in housing provides a broad based analysis of principal shortcoming of housing delivery without solutions; yet building upon the framework of single-family housing for its entire assessment of the problem statements cited as follows:

(i)The cash-and-carry home ownership by the informal private sector (single unit developer who traditionally provide the bulk of total housing production) rather than mortgage based financing prevented the evolution of a mortgage culture in Nigeria. These have hindered the use of mortgage financing as a vehicle for effectively channeling the glut of funds in the informal sector for the overall health of the economy.

(ii)Lack of proper linkage of the housing programme to mortgage financing,(including, problems of affordability caused by sporadic review of house prices, government failure to deliver houses after collecting down payments) Table 5.2 shows the type of housing financed by the intuitions as interpreted from the government policy framework. The target housing policy already streamlines the possibilities and leaves the public with no flexibility, choice, or arrangements; rather they have to rely on their coalitions and sometimes conflicting social arrangements that adversely negates the objectives of planned actions.

(iii) Ineffective housing finance system driven by depository arrangements comprising: (failure of PMI's to source long term savings funds from public rather than relying on NHF, deployment of PMI's funds in non-core financing of operations, due to escalated interest rates in the country especially in the 90s; and meager mortgage lending under commercial terms by banks and PMI's.

(iv) Reliance of NHF on statutory and compulsory long term savings only to fund housing. (in September 2005, the NHF had an outstanding commitment of over N15 billion as undisbursed approved loans against a net collection of N7 billion besides the outstanding application valued at N44 billion.

(v) Refusal by banks and insurance companies to invest in the NHF as required by law (this may be attributed to lack of national stability, as well as the lack of financial accountability by government who were the sole guarantors of the fund). More so, the failure of FMBN to charge and pay market rates for such funds was also a discouragement to banks who had to account for depositors' funds based on prevailing interest rates plus the restriction of access to loans imposed by the land titling process and governors' statutory consent due to the land use act of 1978.

(vi) Absence of legal, regulatory, and institutional structures for robust mortgage finance: This requires a deliberate linkage of the capital market with the mortgage market. There is currently insufficient legal framework comprising mortgage peripheral legislations such as mortgage institutions law established by decree no. 53 of 1989, NHF law, decree no. 3 of 1992, FMBN law, decree no. 82 of 1993 (FGN, 2003). These decrees do not deal adequately with securitization law and the mechanism for non-judicial foreclosure to deal with protracted litigation involved in mortgage recovery.

(vii) The absence of the secondary mortgage market: Mortgage originators by primary market operators have been low due to meager financial resource mobilization. (banks' reluctance and ultimate refusal can be attributed to low capitalization of banks).

This was overcome in 2007 through the national recapitalization of Banks, but nothing has changed significantly since government guarantees cannot be secured and interest rates are still as high as 22% per annum and no homeowner can afford to repay such loan as a middle-income earner.

(viii)The absence of policy frame work which grants accent to mortgage business; consequently, mortgage lending is treated like any other lending activity(low tax rate, low interest rates are not applicable in principle as well as the time lag for the banks to decide on granting the loan. This is at variance to the economics of the housing/real estate cycle.

The above example of a government reform shows that the entire eight shortcoming of housing delivery is similar to those of Awotono (1990). This means that in a span of about thirty-three years government policies recognize the failure of planned programmes. Figure 5.1 shows a physical dimension to the conceptual failure. It is evident that there is duality in the housing financing; just as the informal sector provides 70% of rooming housing in Lagos (cited earlier), 70.5% of formal financing by the formal sector are bungalow housing. From previous analysis on the ‘urban setting’; it is evident that most of these housing are located outside of the city limits due to ease of access to land. However, the implication is that this weakens sub-regional networks around the nucleated neighbourhoods of the city and increases government expenses on infrastructure development. The urban sprawl often unplanned becomes governments planned objective and this cycle keeps government a step behind in the provision of infrastructure and proper planning.

\*(There is currently a new property development tax paid at the point of planning approval to Lagos state government for every square meter of building set at N5,000; this excludes all other development levies; so an average planning approval for a bungalow in Lagos would cost about a \$1000USD equivalent to N150,000=00).

**Table 5.2Types of Property Financed with Loan fund**

| Types of property | Frequency | % age |
|-------------------|-----------|-------|
| Bungalow          | 215       | 70.5  |
| Block of flats    | 45        | 14.5  |
| Duplex            | 20        | 6.6   |
| Detached house    | 25        | 8.2   |
| Total             | 305       | 100.0 |

Source;Field survey in western Nigerian cities,2003(Ojo,2004)

In this research development, the roles of housing development actors/partners, the legal framework, and the mobilization/allocation of resources are observed as critical to the outcomes of policy approaches.

### **5.3 The roles of actors/partners**

This study identifies four types of institutional stakeholders. They are the federal, the state, the local government representing the three tiers of government and recently the formal private sector (represented by REDAN members). The federal government agencies are FMHUD, FHA, and FMBN. They formulate the policy framework, direct development, and financing respectively. The state governments are to establish agencies for development, such as LSDPC, state ministry of housing which would directly create the enabling environment for developers or participate in housing production. The local government (councils) is to assist in forming housing cooperatives. The assumption is that this level of government is in touch with the people and is in position to improve social coalition. The private sector participation includes financial intermediaries, (banking and non-banking) and purely private and individual investors such as REDAN which is recognized in government policy framework for PPP.

However, from the above it is important to note that the basic framework for housing delivery remains distant from the beneficiaries and the framework for public private participation remains unclear and poorly defined. The federal and state government still perceives their roles as primarily that of housing production rather than enablement as seen in their allocation of land rights and budgetary allocation for housing production annually. The local governments are practically not involved except in its weak development control unit.

### **5.4 The legal framework**

The consequence of the major legal framework, which is the Land Use Decree of 1978, as discussed earlier, are two sided; land allocation and access. The conflict, which emanates from allocation and access are such that it has increased land speculation and arbitrary access to land (and inequitably distributed land away from the direction of actual needs). Attempts to repeal the land-use decree has lingered as it obviously benefits a few.

The second legal framework is the Nigerian Town and Country Planning Ordinance No.4 of 1946(Cap 155 of the Laws of Nigeria). This was earlier discussed extensively in its use to classify towns as first or second class based on the availability of electricity, roads, and pipe-borne water. The import of this framework was a political divide among responsive groups to national or regional government. The consequence is that the national framework for infrastructure and housing development remains politicized. A close look at the physical development controls for housing within state governments shows that certain land sizes and house forms are acceptable in parts of a city based on the paucity of its middle-income group

who can socially hold sway in government circles. Rather than strict regulatory framework, and this applies to almost all building types. Neighbourhoods' outside of government-planned layouts are less likely to obtain infrastructure development (Aradeon, 1982). They often rejoice when one of their residents are elected into government office relevant to their neighbourhood as they are likely to receive the needed attention to their plight of lack of basic amenities such as water, electricity road and drainage. This was evident in the field study of this work from the four selected states discussed later.

More so, changing building regulatory framework at the state and local government levels seemingly orchestrates the development pattern in most cities of Nigeria. They do not reflect the recent building code (FMHUD, 2006; yet to be implemented actively anywhere in the country) which was to form the basis for development control nationally. Some of the arguments against this legal framework are the obsolete nature of the referenced laws and byelaws as well as their ineffectiveness for modern times and local realities for households and actors/partners.

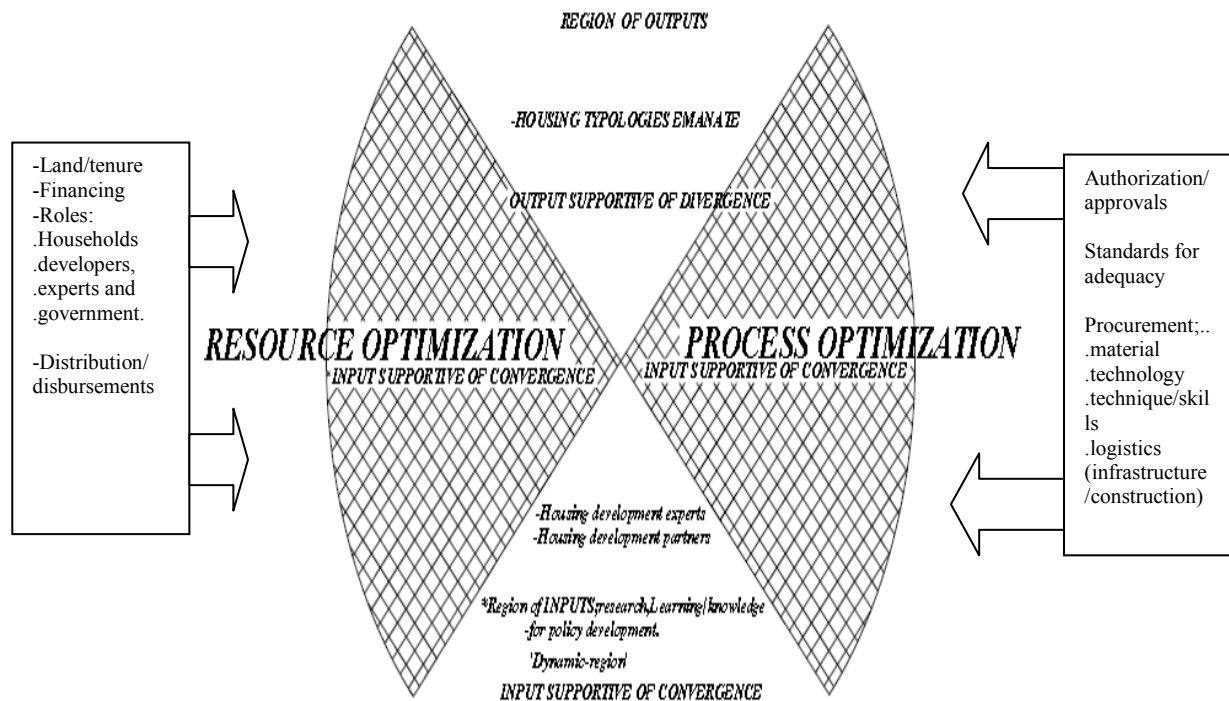
The realities of existing legal framework for housing shows inadequate definition of roles, of land and development rights at various levels of government in relation to the household, housing development actors/partners at all levels and housing experts of all professions. There is need for harmony and delineation of stakeholders' roles for effective implementation as well as annual review in response to changing times. Rather than the current piecemeal, approach that further complicates the situation. However, the Law Reform Commission established to review the land use decree is yet to make its findings and recommendations public as at the compilation of this report.

### **5.5 The mobilization/allocation of resources**

This study shows that with a comprehensive approach to the arrangement of institutions and organizations the improvement of efficiency for housing delivery systems is achievable; rather than the use of policy instruments to further truncate HDS or instill lopsided improvement to society, which is void of equity and justice.

From the above, in order to strengthen partnerships which this study infers as an offshoot of arrangements among institutions and organizations engaged in housing production three incidences must occur to create efficiency namely; public infrastructure investment, suitable operations/maintenance of housing and housing financing. The measurement of HDS outcomes is in direct relation to the reality of these aforementioned incidences.

The above outlook gives insight to the parameters within which any meaningful partnerships originates in order to actualize adequate housing. It is evident that the existing framework is weak, the actors are yet to be clearly delineated and strengthened, their legal framework is still very prejudicial and outdated while the structure for resources mobilization remains ineffective. Figure 5.1 below gives a general overview of this research position in the conceptualization of the national housing framework from historic developments.



### CONCEPTUALIZING NATIONAL HOUSING FRAMEWORK FROM HISTORIC DEVELOPMENTS

**Figure 5.1** Conceptualizing National Housing Framework from Historic Developments (Author) Relationships between physical and non-physical elements of national housing framework deduced from the foregoing historical developments.

#### Notes:

That shifts in land/tenure, financing and Roles converge into effective distribution and disbursements, thereby optimizing resources. Similarly, shifts in authorization, standards, and logistics converge into effective infrastructure and construction thereby optimizing processes. The region of input below influences the meeting point of these two tips of convergence, which is a supportive convergence of knowledge in the industry by housing development experts and housing development partners. This tripartite convergence into a single-thrust is eminent towards forecasting the emergent housing typology above. This segment above is divergent in expression as this is the region of output. The region of output is called outcome-2 (as previously cited).



## CHAPTER SIX: DELINEATING HDS, PPP, AND AHD

### 6.1 Introduction

The objective here is to review literature that deals with delivery systems, partnerships, and adequacy as key components of institutional and organizational arrangements among actors towards housing provision. By this, highlight the key determinants. However, from previous literatures reviewed, the national housing framework posits a fundamental optimization of resources and processes as its policy thrust. In the case of Nigeria, this is not achieved because there is a gap between planned objectives and outcomes and it is evident in the HDS.

### 6.2 Factors determining HDS, PPP, and AHD

To investigate the subject of HDS, PPP and AHD, which this research proposes as interrelated, certain factors thought to be their determinants and evident from the body of literature are deduced as shown in table 6.1 and discussed below.

**Table 6.1** List of determinants of HDS, PPP, AHD, and Architectural typologies

| <b>Determinants of HDS</b>                            | <b>Determinants of PPP</b>                   | <b>Determinants of AHD</b>                              | <b>Determinants of Architectural typology</b> |
|---|--|---|---|
| Government policy/framework                           | Profit motive of partners                    | Building activity regulation (in relation to standards) | Syncretism/lifestyle                          |
| Household size  | Provision of infrastructure by public sector | Household size/overcrowding                             | Cultural response to space                    |
| Household income                                      | Land tenure/access to land                   | House form/function                                     | Climatic conditions                           |
| House form/concept                                    | Interest rate                                | Quality of housing                                      | Material technology                           |
| Levels of housing demand/supply                       | Property price                               | Quantity of housing provision                           | Household size/characteristics                |
| Provision of infrastructure                           | Access to financing                          | Quality of housing environment                          | Building activity regulation                  |
| Levels of building activity regulation                | Levels of actors/partners commitment         | Levels of actors/partners commitment                    | -   |
| Layout typology                                       | -  | -   | -   |
| Process costs of building activities/process function | -  | -   | -   |

Source: author

#### 6.2.1 Determinants of Housing Delivery Systems (HDS)

Housing delivery systems is an organizational and institutional arrangement within a broad social structure in relation to production, distribution, and consumption of housing (Ying, 1997; Prins, 1994).

Thorns (1977), pointed out that housing values, constraints and sub-markets drive a housing delivery system. These values set the housing goals yet two levels of constraints deter the achievement of the housing goals; societal levels (economic structure, public policy, building activity regulation) and household level (income level, capital accumulation).

Three key components identified as critical to housing delivery systems are namely: The production of housing (what to produce, how many to produce, and what technique/method to use for production?), secondly, the distribution of housing (location, beneficiaries, method of allocation) and thirdly, the consumption (the household size, income level). The list shown in table 6.1 gives an indication to the factors that determine HDS. In Lagos, it is common to see households, actors/partners and experts adhere to or circumvent existing government policy framework in an attempt to achieve housing aspirations.

### **6.2.2 Determinants of Public-Private Partnerships (PPP) contributions in housing provision**

The idea of actors/partners working together interdependently towards a common goal is the principal thrust of partnerships (Yau,Lu,2007;Senguta,2006;Payne,1999;Spackman,2002; Duanfang, 2007, Angel, 2000). Various models of PPP as described in section two have been adopted for housing delivery as it relates to varying societal needs (Batley, 1996; Jones et .al, 2000;Robert.et.al, 1997;Li-Yinshen, et.al,2006).

As stated earlier, the main objective of PPP approach was to improve efficiency of the housing sector. This is by the public sector concentrating on eliminating constraints on both supply and demand of housing (Angel, 2000). These constraints include; securitization of public sector investment by creating financially conducive environment for funding housing and achieving profit motives among partners, provision of infrastructure, reduce associated cumbersomeness to land acquisition, among others.

Pugh (1994) surmised that, the success of the enablement approach as proposed by the World Bank is dependent on the success of partnerships. To include private sector capital is to infuse profit motive as ROI becomes inevitable. Table 6.1 shows that apart from the profit motive determinant, provision of infrastructure by the public sector is a determinant of partnership in much the same way as it involves the private partner's commitment. An incentive to private partners to participate and be committed to housing delivery through PPP is essential; given the plethora of other HDS through which housing enterprise can still operated by the private partner.

### **6.2.3 Factors Determining Adequate Housing Delivery (AHD)**

Adequate' is a key component of a predetermined yardstick which is favourably accepted as the criteria (Mabogunje.et.al, 1978). This criterion gave credence to standards and defined as;

‘the official’ (established by legislation etc.) and ‘the cultural’ (derived from traditional practices or found tolerable/acceptable by a large number of people).

‘Criteria’ was defined as guides to social values or recommendations offered by professional or scientific bodies and based on research, case studies, or professional judgment (Mabogunje, et al.1978). The conflict between official and cultural standards is responsible for inefficient functioning of human settlements. Three dimensions of standards delineated from the cited study are namely, ‘the scientific,’ (which is the extent to which standards are based on available scientific knowledge), ‘the cultural’, (which is the extent to which standards are culturally feasible), and ‘the social’, (which is the extent to which standards improve the quality of life).

Therefore, standards should be scientifically desirable, culturally feasible, and socially acceptable. Furthermore, Mabogunje et.al (1978), criticized the existing standards in most developing countries on the following eight-grounds:

(i)Indifference to local experience (ii)lack of reference to local resource situation(iii)irrelevance to local culture,(iv)inappropriateness of the technology(v)lack of relation to local economy(vi)the virtual impossibility of enforcement(vii)encouragement of social stratification(viii) urban bias of standards.

The lack of adequate conceptual approach (theory) to the dwelling unit has led to unrealistic quantifications of the dwelling stock and similar unrealistic needs of each community (Brandsen, 2001). Quantification is based on census definition of target users and choice of a dwelling tilt to the cultural preferences of the government agencies making the definition (Mabogunje.et.al,1978).

Among the various types of standards in housing identified in this study (ibid) are; space standards (the amount available space and rights of the user; e.g. minimum lot sizes, number of buildings per unit area, occupancy ratio, or density). Secondly, technological/performance standards (quality of environment, quality of construction, types of materials, quality of services to be offered, building bye-laws/codes of construction, regulations on water, fire, noise, effluent,). Thirdly, the threshold and range for standards (standards for per capital supply of water, patients per hospital bed, maximum area serviced by a facility, as well as minimum), Mabogunje.et.al, (1978).

In Lagos, the sources of standards and criteria applied to the provision of shelter are derived from at least seven disparate sources (ibid) and they are:

- 1-The laws of Nigeria,Township Ordinance Cap.216 of 1948
- 2-The laws of the Federation of Nigeria and Lagos Public Health Ordinance Cap.165,vol.5 of 1958;subsidiary legislation vol.9 of 1958.
- 3-Lagos City Council,Building Byelaws and Regulations-Extracts from Lagos Government Byelaws(1937-47)
- 4-Lagos Local Government Act.No.18 of 1959.
- 5-Lagos City Council Drainage and Sanitation Byelaws 1970.Extracts from Lagos Local Government Byelaws.
- 6-Manual of Space Standards for Urban Development in the Western State of Nigeria.Technical College,Ibadan,1971.
- 7-Metropolitan Lagos;Interim Land-Use Housing Plan;Physical Planning Division,Ministry of Works and Planning, Lagos State Nigeria.

\*(National building code 2007: is still not operational and yet to be passed as a law).

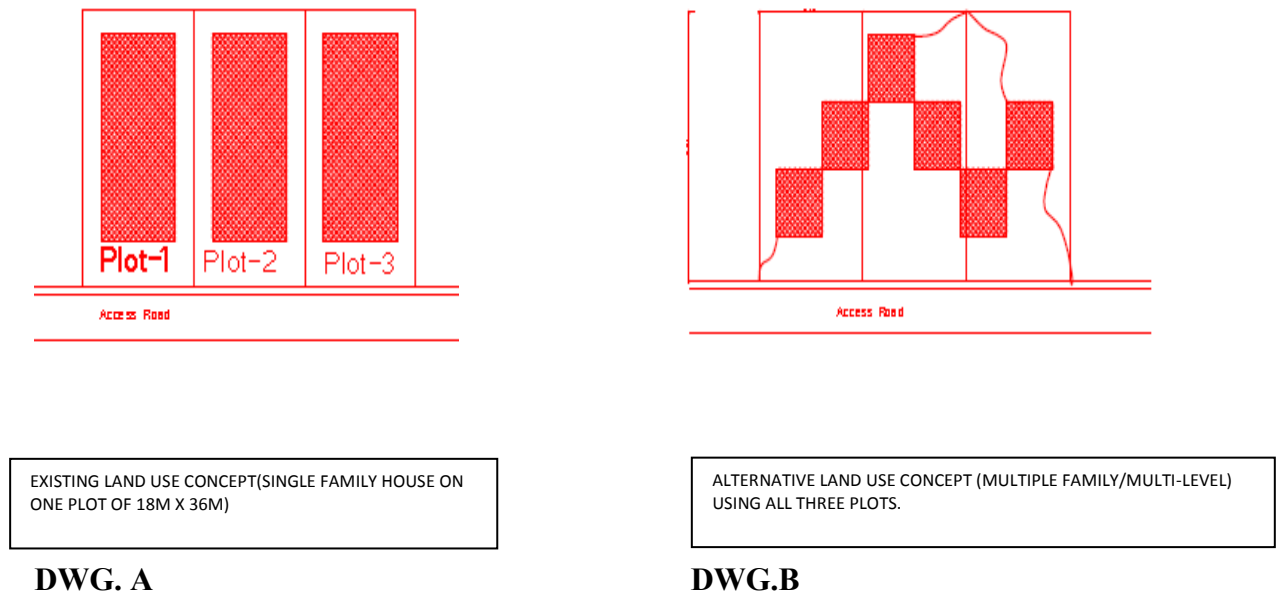
This overview of standards, which regulates development and consequently housing development, are so disparate. The consequence is indicative by the physical development chaos, which is evident in most parts of the city of Lagos and similar cities in Nigeria. For instance, the local government act empowers the local government to initiate projects at their level. The result is the indiscriminate construction of roadside shops, which consequently obstruct free flow of traffic within urban centers. A good example is the pictorial view of Lagos in both 1930 and 2010 in chapter four. From this study, it is evident that conditions for standard setting proffered include cultural compatibility, social responsiveness, economic feasibility, technological suitability, physical/biological harmony, and temporal relevance.

The listed factors thought to determine AHD includes building activity regulations (see table 6.1). It is evident that this accounts for the disparity seen in the Lagos built space among households, actors/partners. Other determinants like household size and house form/function are important for delineating adequacy as well.

### **6.3. Determinants of Architectural Typologies (House/Housing Design)**

Interpreting the architecture of housing through the single-family house form/concept is essential to understanding the determinants of housing design. The interplay of four factors namely the land use systems, the land use design, the variable factors of spatial use and physical control have been identified as the key components between design intentions and realities of spatial use (Aradeon,1981). These are descriptively represented respectively as

follows; the verbal description of planning intentions denoted by, interpretation of planning intentions, the reflection of social norms and monitoring from conception to actual use. The figure 6.1, demonstrates how a shift in land use concept can affect density. More so, it further demonstrates the flexibility arising from variability of spatial use. It is from these dimensions of housing design that the determinants listed in table 6.1 emanate.



**Figure 6.1** Evolution of Land Use Concepts in Nigeria: Drawing A and B

\*Design,Resource management and Physical Control:Based on Aradeon(1981,pp.25-41)Drawing on the left is standard practice while drawing on the right increases the density and allows for more use of space to meet social needs.The verticality can be achieved at the point where squares meet each other as stair cases for multi-storey housing.

The analysis of the single-family house form as earlier stated suggests syncretism, which is also in response to space. The fundamental issues of omnibus use of space are subject to the actual designed space for households. The assumptions of housing development actors/partners and experts in delineating meaning and creating functional space is associated to the households perception of that space. The household unfortunately is a heterogeneous and dynamic entity that occurs as different social focus groups with varying housing aspirations that are fixed or transient. In the architecture of housing of concern is the variable factor of spatial use, which is derived from the household needs and aspirations. To delimit this factor in terms of household size/characteristics is to enforce building activity regulation that would result in blatant contraventions by household.

#### **6.4 Delineating an emerging 3Q factor for Housing Delivery Systems**

The 'outcome-2' as shown in figure 6.3 is to occur because of the infusion of the terms of adequacy for the HDS as an overall outcome. This posits improvements in the quantity of housing, the quality of housing, and the quality of housing environment/lifestyle. Therefore, housing delivery system the concepts of partnerships and adequacy are vital to the overall mechanism. This emerging concept when dismantled into components captures the essence of HDS from which determinants exists as above. Also, see figure 4.26.

Therefore, the variability of outcomes of housing decisions and programmes is evident in terms of the overall adequacy of the partnership. To deliver adequacy of housing as in outcome-2 (of figure 6.3), the following must occur: Firstly, the adequacy of the housing quantity, (Quantity of housing- $Q_1$ ), secondly, adequacy of the housing quality (Quality of housing- $Q_2$ ), thirdly the adequacy/quality of the housing environment (Quality of housing environment- $Q_3$ ).

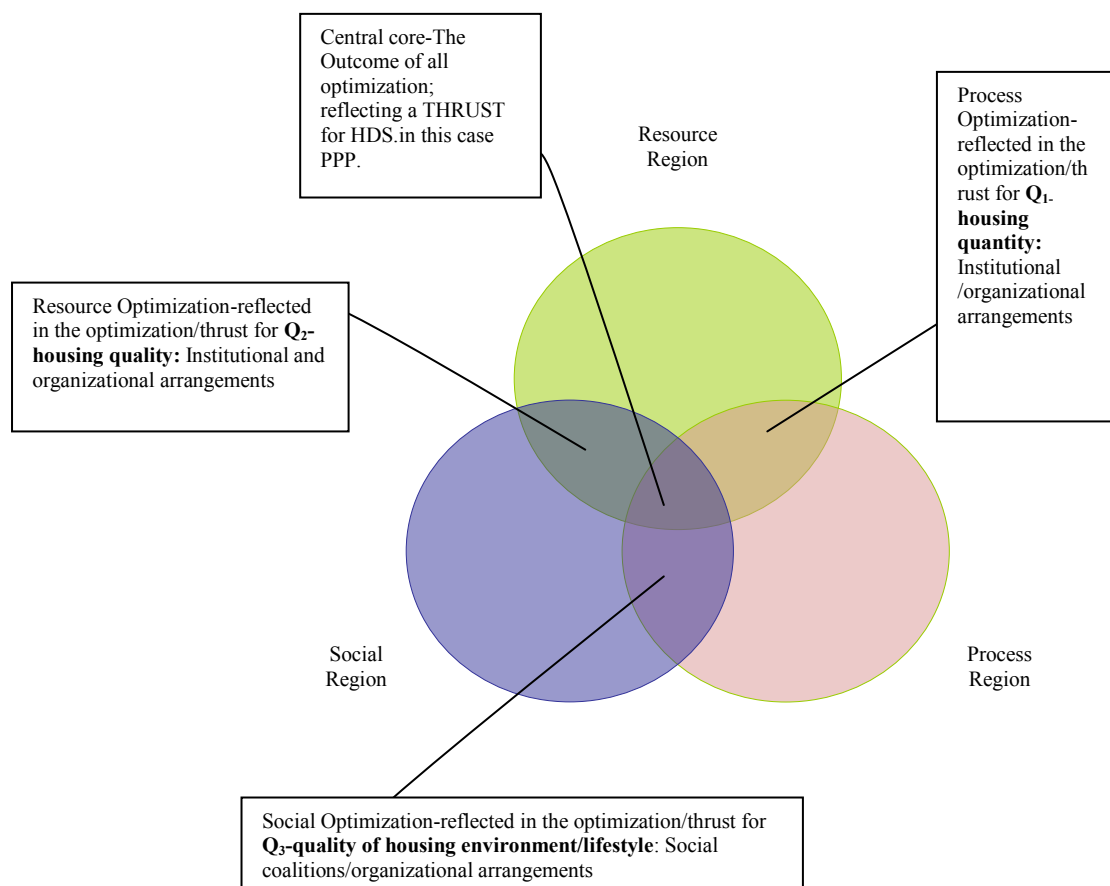
The housing quantity focuses on the supply of housing in terms of culturally acceptable living patterns as against a prescribed house form or target pricing. The institutional framework by this thesis allow for coalitions among partners to evolve patterns that would meet their demand as well as reduce the pressure of replicating infrastructure at a cost that is not affordable by their economic settings. From the study as earlier cited, 70.5% of formally financed housing in western Nigeria is bungalow type (Ojo,2004); while the informal private sector produces 70% of Lagos housing which is rooming type (FOS,2004). This is traceable to the institutional framework and this negates the overall conditions for the efficiency of HDS. Other types of housing typology do not receive the same institutional support and a transition would be near impossible.

Therefore, assessment of quantity was in terms of demand brought by changing lifestyles, household size, and the needs as against standardized lot sizes which are predetermined and regulated by law (especially when living patterns have outdated most of these laws. For example, there is the possibility of converting European styled business parks, industrial layouts/warehouses into housing. Instead of retaining rigid planning regulations and creating urban blight in these areas where most of the industries no longer support their European end-users or even local end-users. The ideological concepts and mechanism to deliver such housing would have to alter known pathways associated with regulatory bodies that have characterized housing theory and most adversely affected African cities.

Similarly, the quality of housing when reappraised based on cultural acceptance and material technology should be in relation to economic empowerment of the beneficiaries towards adequacy (UNCHS/ILO, 2006).

More so, the quality of environment is in response to culture specific values, rather than market driven technology-based assessment that are not sustainable. Whereby, Traditional and rational ease of maintenance within socio-economic means of the beneficiaries is taken into cognizance.

Given this backdrop, this research considered partnerships as an instrument of housing delivery, which when properly utilized can improve the quantity of housing through coalitions and improve the quality of housing and the housing environment. This relationship is expressed below diagrammatically in figure 6.2.



**Figure 6.2** Relationship between Resource, Process, and Social optimization for HDS (Author)

From the figure 6.2 above, the central core defines the Subsystem, which bears the embodiment of housing development actors/partners thrust theoretically, which in this study is PPP. In practice, this may not occur in that strict sense. No single subsystem of HDS in reality

operates in isolation of other subsystems. They are all in a conundrum jostling for prominence and only a regulated interplay of resources, processes, and social settings delineates the appropriate optimization.

From the literature, it is evident that the determinants of elements of HDS tend towards certain objectives. However, all these objectives attempts to solve the crisis of housing as reflected in three major ways. This tendency is reflected in the above figure 6.2 as the Q<sub>1</sub>, Q<sub>2</sub>, and Q<sub>3</sub>.

Therefore, the relationship that exist among the elements of HDS which determines HDS are fostering a universal action towards achieving this triune objective of Q<sub>1</sub>, Q<sub>2</sub>, and Q<sub>3</sub>. This research refers to this triune objectives as the 3Q-factors for HDS and they are also the optimum universal objectives of any HDS.

Hence, this study refers to this phenomenon and direction of objectives, which influences HDS as the 3Q-factor for HDS objectives. In this research development, HDS Objectives posits an internalized thrust that encapsulates the 3Q factor. An optimization of the 3Q-factor directly improves the subsystems' contribution. By this, becoming a predictive tool for determining future levels of contribution by HDS and its subsystems (such as PPP in this research).

### **6.5 Constraints in the Provision of Housing through PPP Contributions**

Olutuah (2005) noted that housing the private sector especially the informal sector has been responsible for provision of over 90% of the housing stock in Nigeria. Housing provision is essentially costly, and the private sector which is profit driven would not be expected to produce socially optimum output in this regard. A number of reasons can be adduced to the poor performance of the Nigerian public sector in housing intervention, especially for the middle to low-income earners (Agbola, 1993; Philip, 1997; Atolagbe, 1997; Jiboye, 1997; Olotuah, 2000b). These include:

- (i) The wrong perception of the needs of the middle/low-income earners by government; for example proximity to work (among others) is more essential to these economic group than the quality of housing environment (Turner, 1972)
- (ii) Provision of very few houses by government, which are nevertheless priced out of the economic reach of middle/low-income earners; principally, due to unspecified criteria for allocation among the likely beneficiaries.
- (iii) Improper planning and poor execution of housing policies and programmes; due to poor policy framework and poorly articulated strategies as seen in the PPP document (FGN, 2008) by the FMHUD the apex policy formulation/monitoring body.



(iv) Inadequate database: an offshoot of political divide and corruption.

Over the years, the public sector realized its shortcomings in housing provision (FGN, 2004) and it took a giant step to correct this by enacting the National Housing Policy in 1991. The policy, which was revised in 2004, entails strategies for housing provision and the institutional framework for it, which has been enumerated elsewhere in this work.

**6.5.1 Limitations by Government Policies and Programmes;** government policy and building activity regulation; the general framework is weak and most times lacks implementation strategy. The entire study points to this fact at the national and state government levels of institutional arrangements. The local government level is actually less visible. Although, they are in direct contact with end-users and empowered by legislation to deal with direct enablement issues they scarcely have the required influence to execute their statutory objectives. This in itself creates redundancy at the local government level and ultimately monitoring is weak for the state and Federal level, since these agencies lack human resource capacity to achieve the required level of monitoring.

**6.5.2 Poor Land Tenure System/land tenure problems;** the acquisition procedure, consent provision and titling have remained a frustrating process for most private developers. Even where government has allocated the land, the confrontation that ensues with local families who originally own the land can be devastating to investors. Often times multiple compensations to these family land owners and government increases the already high cost of housing.

**6.5.3 Problem of Development Rights and Planning Approval Process:** The 32 key stages identified for securing land and development rights in Nigerian cities shows that it would take about 381 days averagely to execute this process. The Lagos state government direct intervention with operation 30-30 for submission and obtaining of planning approval from government remains a single item on the 32stages. Therefore the effect is not very visible to prospective homeowners.

**6.5.4 Problem of lifestyle and preferred choice of imported construction material:** Increase in construction cost index; the spiraling cost of building materials. Windapo (2005), price comparison shows that building materials experienced increase from between 250% to 1265% between January 1992 and August 1999. The alternative source to imported building material is direct exploitation of local materials by government and private sector. Studies show its still prohibitive as an increase of 62.5% was observed of 32 items of building materials whose prices were monitored (Okupe,2000): For example, among the materials

widely used and relied upon from imports is cement; Table 6.1 shows a steady rise in price of cement. (Recent exploitation of local cement manufacturing is yet to reduce the increasing pricing of cement).

**Cost of Cement Per 50Kg Bag  
(WAPCO) Price**

| Years  | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| Amount | 32   | 40   | 85   | 85   | 180  | 410  | 430  | 500  | 550  | 600  | 650  | 850  |

Source, Ajanlekoko, 2001

**Table 6.2** Rising Cost of Cement

Currently with the surge in crude oil prices and the global economic meltdown, prices of most building materials have increased. More so, political instability and inability to adapt the democratic process to fit into the new regime, culture (that is largely currently syncretism in outlook) and supportive of the use of imported materials since it is fashionable among middle-income groups, as symbol of affluence becomes a source of concern. For instance, use of imported doors, kitchen cabinets, and bathtubs to mention a few. The cumulative foreign exchange implication on an already weak local currency would adversely affect local economy due to trade imbalance.

**6.5.5 Lack of basic Infrastructure for housing developments:** The cost of infrastructure and the nature of basic infrastructure to cater for the single-family house form are certainly never in relation to the economic settings of the beneficiary. Most times, government subsidy is the main source of funding and unfortunately, government has been consistent in its inability to meet the funding demands. The use of PPP models to fund infrastructure is common in most developed parts of the world, the experience in Nigeria is that the public gets to pay a lifetime price to access these amenities when provided. This throws to question the contribution of PPP on the general development index. Unfortunately, the scope of this research does not cover such aspect but it is confident to express this viewpoint from the foregoing literature. Since housing is the subject, the research turns to the contributions of PPP in housing and infrastructure provision strictly for housing as a key component of the HDS.

Therefore, providing infrastructure for the single-family house form and housing of the middle-income group would remain expensive for most emerging economies like Nigeria. This type of capital intense investment cannot be recovered in direct terms of investment. As for government, they may be able to recover cost indirectly through taxes but the private sector can only include the cost of infrastructure as part of the housing project development cost with

the hope of recovery from sale. It is like selling a car with the cost of road rather than retrieving the cost of road on cars through tolls, registration taxes, etc. In PPP, the private sector obtains land acquisition arrangement at below market rate; unfortunately, the cost of infrastructure is solely the private sector responsibility in the PPP (at prevailing market rate) and this cost outweighs the cost of subsidized land.

**6.5.6 Depreciation of the Naira and High Cost of Construction:** The Naira, which is the monetary value for exchange in Nigeria, continues to depreciate against the United States of America Dollars. The eight years of the former President Obasanjo reforms in housing (1999-2007), experienced a constant fall of the Naira, which continues unabated (FRN, 2003). However, importation of building materials (excluding sand and water) is the main stay of the housing and construction sector of the economy. Increasing housing production would simply continue the depreciation given that over 75% of the building materials for housing are imported. The use of local building material is an industry mantra among housing development experts but they fail to turn such desirable influence into action. As they continue to specify building materials that would adversely affect the economy in response to popular demand while unrestrained by government policy.

**6.5.7 Inaccessible Housing Finance/High cost of capital:** The current operation of new policy windows for housing finance is yet to create the needed enabling environment for households and housing development actors/partners. The duality in financing through the commercial mortgage banks (called PMI's) with access to the apex-mortgage finance (FMBN) on the one hand and the open market interest rate through commercial banks on the other makes for the existence of parallel financing of housing. This invariably made commercial banking more profitable to PMI's, though illegal. Unfortunately, as pointed out earlier, the intent and thrust of the new policy for housing described as the Obasanjo housing reform was finance based. It is noteworthy to point out that this is in a market where mortgage interest rate is advocated at 6% per annum; while the commercial bank lending rate is between 21% and 25% per annum. This sets the stage for policy failure as it would be profitable to round-trip accessible government subsidized funds at lower rates and lend out to desperate non-mortgage borrowers for short term. This has happened before in the early 1990's when mortgage banking was introduced.

**6.5.8 Poor regulation in the Housing and Construction sector:** The current regulatory framework for banks, which streamlined and improved the banking sector, is yet to affect the construction industry. It remains evident from observation that various standards and methods

as earlier discussed remain in use and are convenient to the private and public sector in their attempt to achieve planned objectives in the housing sector.

A case in question is the admission by the court of law that, changing times demand changing legislation. Unfortunately, when such legislation is not in place, the planned residential community who rejects an intrusive shopping mall occasioned by a private developer faces denial of its rights against all existing laws guiding planning regulation and common sense; by dismissing planning regulations as not recognized by law (the case of mega plaza and neighbours, Victoria Island, Lagos).

Given this framework, the chief planner for any state remains the custodian of land rights, and development rights, the legal framework guiding development by the land-use decree of 1978 confers such rights on the state governor, and he decides what is built, where and when?

Therefore, by default in Nigeria, the power content of all coalitions (institutional and organizational) is more important than the science of housing and all its stands for theoretically. This is definitely evident in what has become of the Lagos built environment and the country at large.

## **6.6 The Gaps and Obstacles between Planned Programmes and Realizations**

The performance of housing delivery programmes by Federal Government over the period under evaluation has been below expectation (Awotono,1990, Omenge,1977). The Lagos State Government has however, in like manner failed to achieve planned objectives in housing as well. This is against the backdrop of huge financial investments so far expended. The gap between planned programmes and realization are evident in the following examples;

- In the first national development plan 1962-1968 about three million nine hundred thousand pounds (£3.9million Nigerian Pounds) was spent on town and country planning primarily in Lagos. Very little was spent on direct housing for the masses.
- In the second national development plan, 1970-1974, out of a budget of N4billion, housing was allotted N19.07million (which included town and country planning). Essentially less than about N2.634million was allocated for housing.
- In the third national development plan, 1975-1980; a planned construction of 202,000 housing was projected and less than 15% was achieved all of that achievement was mainly in Lagos.
- In the fourth national development plan, 1981-1985; N1.6billion was allocated to housing to construct 40,000 housing units in 303 local government areas of the federation. This budgetary allocation was further increased to N1.9billion for construction of 160,000units. Only about

32,000 were achieved and several of which were unoccupied and abandoned due to wrong location and an outright socio-cultural rejection by the intended households. This represents about 15% of the projected.

-In the fifth and the rest of the national plans remains a foray of promises by new regimes and government agencies. Even the private sector has taken to such large-scale advertisement of their capabilities to achieve housing production wonders. For example FHA (a public-corporate agency) planned 21,000 housing units in all state capital of the federation, until date it is yet to be actualized, in Lagos where they started they are yet to achieve completion 15years later: Similarly, the satellite town development and several others. Recently a private sector developer promised 5,000 housing units in partnership with government at Abuja it is yet to achieve 10% of the projected estimate.

Fadahunsi (1980) and Awotono (1990) identified among others reasons responsible for the difference between planned programmes and realization;

- shortage of housing finance
- cumbersomeness in land acquisition
- high cost of building material and construction
- adoption of single design for entire country (for ease of pricing and construction reasons)
- site and location of housing schemes
- politicizing of housing by politicians in governance
- utilization of incapable contractors on preferential terms
- lack of definition for private sector participation
- poor institutional framework for setting up and implementing programmes
- high cost of funding single family-to-lot housing
- lack of cohesion in policy framework
- use of unrealistic standards for target housing

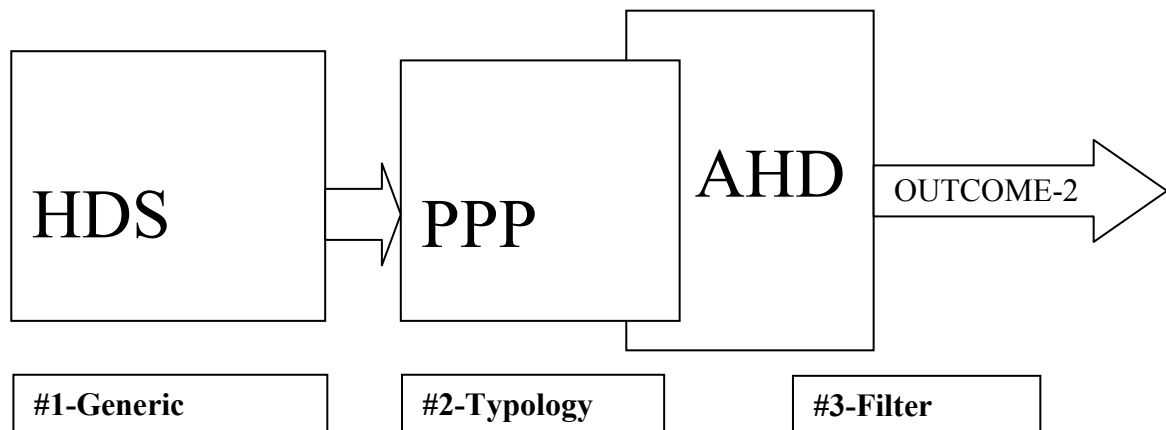
It is evident that the major factors responsible for this disparity experienced can be grouped as follows;

- Socio-political
- Socio-economic
- Cultural (in terms of values and social capital)
- Technological know-how

## **6.7 Summary**

The determinants and constraints of HDS, PPP, and AHD are obvious in housing among households, housing development actors/partners, and experts. The needed comprehensiveness

is absent in their efforts to achieve increased housing production in terms of quantity, quality and quality of life (housing environment).



**Figure 6.3 Proposition for a linear relationship between HDS,PPP,AHD and outcomes. .**

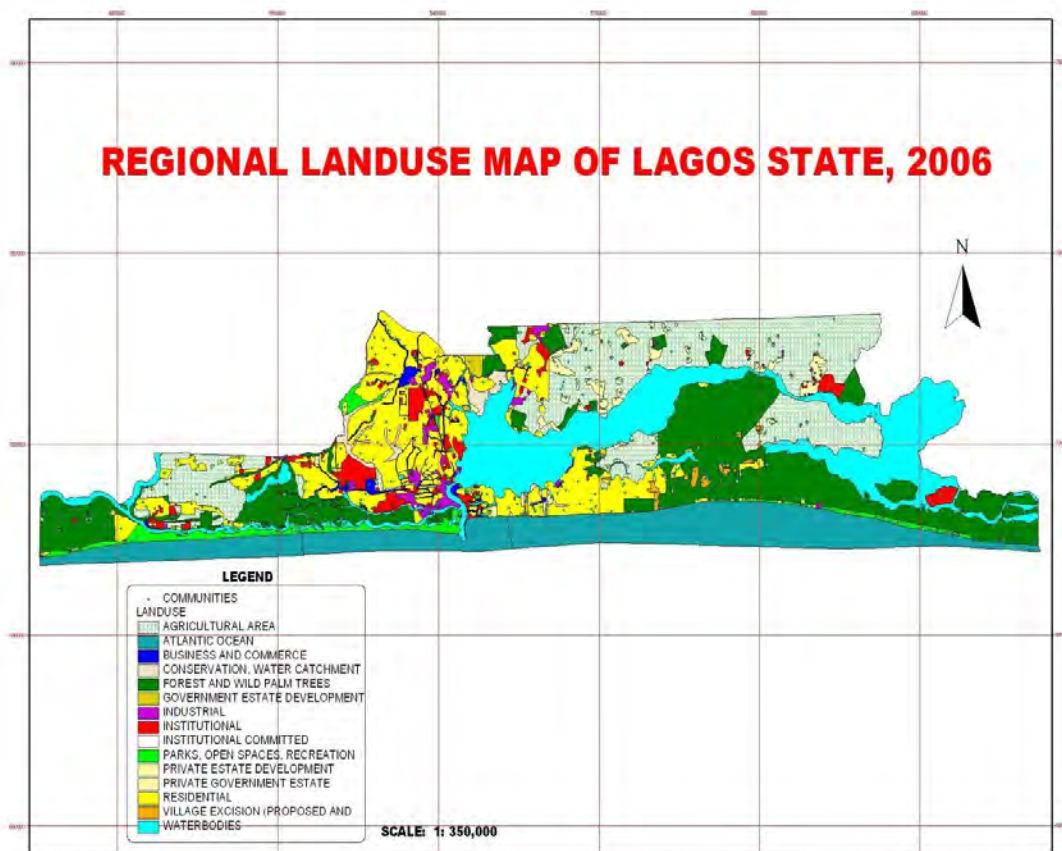
From the above figure 6.3, the determinants of HDS are common to all delivery systems and PPP is an offshoot of a particular thrust adopted for housing delivery. This is a typology of the manifestation of HDS. However, the determinants of AHD create a filtering zone to refine the outcomes of any type of HDS occurrence in reality. It is from this outcome that contributions are physically measured. These measurements vary contextually in terms of what this research calls the 3-Q factor as previously stated.

## CHAPTER SEVEN: THE LAGOS CASE STUDY

### 7.1 The Dynamics of HDS in Lagos

The housing delivery system in Lagos is similar to other parts of the country except for the peculiar arrangements of sub-systems and sub-markets among households and housing development actors/partners. The foregoing literature review establishes this trend. The original city called Lagos Island (Eko) was the site of an emerging traditional city. It grew because of fleeing refugees and conquerors from the Benin kingdom that settled into an agrarian lifestyle. Later, it became a trading post before the advent of European occupation and as a center of commerce in western Africa (UNCHS, 1993). Lagos is located south-west of Nigeria (see figure 7.1 below) between latitude 6° and 7° north of the equator and longitude 3° and 4° east of Greenwich meridian. A total of 1,090square kilometers of coverage while 208square kilometers of that area are water and mangrove swamp (UNCHS, 2001).

**Figure7.1**Regional Land use map of LagosState

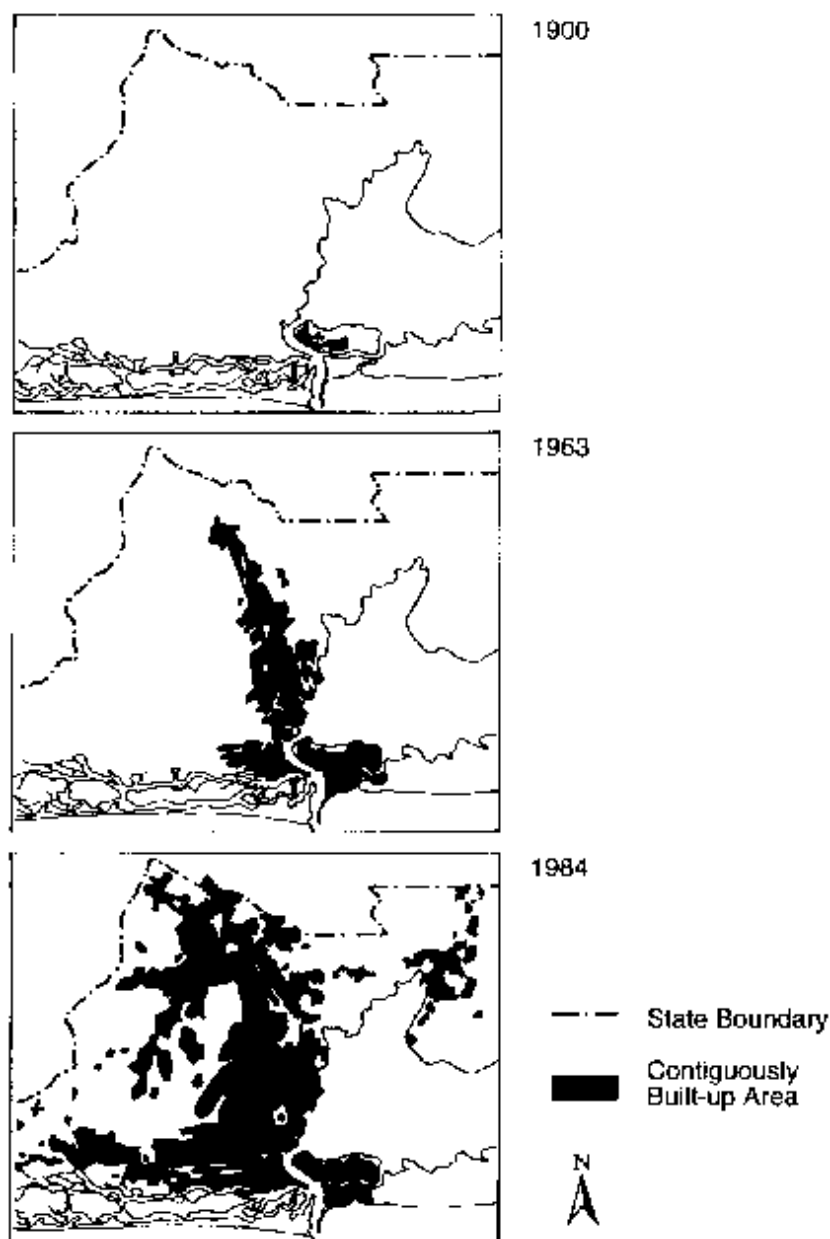


Source:LASG,Min of physical Planning 2008

The average population density is more than 500 persons per acre and about 36 persons per single house (UNCHS, 1993). Figure 7.2 is a spatial attestation to this steady growth and urbanization resulting in this density. This data does not represent the use of single-family

house alone. The driving force behind such an alarming occupancy ratio is the bustling commercial activity that is traceable to the entire West African region. These activities occasioned intense profitability through owners of the few housing stock to accumulate surplus value. This is a direct consequence of socio-economic conditions. Therefore, the informal sector with little or no formal planning and resistance from regulatory authorities seemed to have catered for the teaming population accommodation that is less than acceptable standards (Mabogunje, et.al, 1978; FOS, 2004). Unfortunately, history and legislation has never proven the informal sector wrong in over a hundred years of housing experience in Lagos as the informal sector perpetrates contravention of planning regulations with recklessness.

**Figure 7.2** Growth of the built-up area of metropolitan Lagos, 1900-1984



(Source: Town Planning Services, Ministry of the Environment and Physical Planning in Abiodun, 1993)





Unfortunately, this density is comparable to New York's Manhattan, only that Lagos lacks the basic services and infrastructure as shown in tables 7.2, 7.3, and 7.4 for electricity, water, and toilet respectively. The general state of its urban infrastructure is poor and the traces of those still relatively functional are either in disrepair or overburdened by the surge in population, hence inadequate and a total 'housing failure' (UNCHS, 1993).

**Table 7.2** Percentage Distribution of Household type of electricity Supply-Lagos state

| Year | PHCN only | Rural Elect. only | Private Generator | PHCN/ Generator | Rural Elect/ Generator | Solar energy | None |
|------|-----------|-------------------|-------------------|-----------------|------------------------|--------------|------|
| 2007 | 67.3      | 0.1               | 0.5               | 30.8            | 1.1                    | 0.0          | 0.2  |
| 2008 | 57        | 0.0               | 0.9               | 40.9            | 0.9                    | 0.0          | 0.3  |

Source; NBS, 2009 (PHCN-Power Holding Company of Nigeria)

**Table 7.3** Percentage Distribution by household of Major sources of drinking water-Lagos state

| Year | Total Households | Pipe borne water treated | Pipe Borne Water Untreated | Bore Hole Hand Pump | Wells Springs unprotected | Well spring protected | Rain water | Stream/ Pond/ river water | Tanker/ Truck | others |
|------|------------------|--------------------------|----------------------------|---------------------|---------------------------|-----------------------|------------|---------------------------|---------------|--------|
| 2005 | 2,497,419        | 48.7                     | 7.4                        | 15.3                | 6.4                       | 13.5                  | 3.4        | 5.3                       | -             | 0.0    |
| 2008 | -                | 8.4                      | 1.2                        | 73.8                | 2.1                       | 5.0                   | 0.3        | 0.0                       | 7.5           | -      |

Source; NBS, 2009

**Table 7.4** Percentage distribution by household's; type of toilets-Lagos state

| Year | None | Toilet on water | Flush to sewage | Flush to septic tank | Pail/bucket | Covered pit laterin | Uncovered pit latrine | VIP latrine | Other types |
|------|------|-----------------|-----------------|----------------------|-------------|---------------------|-----------------------|-------------|-------------|
| 2007 | 0.1  | 3.4             | 13.4            | 39.2                 | 0.6         | 25.8                | 15.3                  | 0.0         | 2.1         |
| 2008 | 2.3  | 1.7             | 27.9            | 45.5                 | 0.0         | 14.7                | 4.4                   | 0.5         | 2.7         |

Source NBS, 2009

However, commerce remains the driving force behind all the activities in Lagos. The stock market (for the conglomerates), the ivory tower buildings (for white-collar jobs and services), and the traditional market (for trading), remains the long-standing business models for the city. The traditional markets have sustained the majority in Lagos alongside formal western business models; hence, residential areas are never purely residential except on paper (Aradeon, 1981).

It is evident that, in this trend of development within the city very little consideration is given to other functions of land outside of commercial and residential development. Since the aggressive approach to housing and commerce alone and the need to accumulate, surplus value is more important to the government and the governed.

As can be seen in Table 7.5 over 56% of the land delineated as Lagos state has been developed; which implies a 100% development of metropolitan Lagos as described by this research (also see figure 7.2 for a graphic description of the growth pattern).

**Table 7.5** Lagos Land cover distribution

| Land cover | 1986<br>Area(km <sup>2</sup> ) | Area%  | 1990<br>Area(km <sup>2</sup> ) | Area%  | 1995<br>Area(km <sup>2</sup> ) | Area%  | 2002<br>Area(km <sup>2</sup> ) | Area%  |
|------------|--------------------------------|--------|--------------------------------|--------|--------------------------------|--------|--------------------------------|--------|
| Developed  | 85.44                          | 43.36  | 96.53                          | 48.95  | 103.54                         | 52.54  | 111.89                         | 56.78  |
| Swamp      | 59.24                          | 30.06  | 48.59                          | 24.66  | 42.97                          | 21.80  | 38.31                          | 19.44  |
| Water      | 52.39                          | 26.58  | 51.95                          | 26.36  | 50.56                          | 25.68  | 46.87                          | 23.78  |
| Total      | 197.07                         | 100.00 | 197.07                         | 100.00 | 197.07                         | 100.00 | 197.07                         | 100.00 |

Source: Okude and Ademiluyi, 2006 (Note: the massive reconstruction and sand filling between 1990 and 2002 within metropolitan Lagos only shows that about 56.78% is developed).

There is therefore a limitation of land and an explosion in population going by tables 7.1 and 7.5 and figure 7.2, 7.4, and 7.4B. It is within this context that certain institutional and organizational arrangements tend to occur to meet the demands and need of housing production, which should cater for the teeming population. The emerging coalition can be observed in the neighbourhood patterns that characterize Lagos, which has been described as ‘nucleated’ in nature (Aradeon, 1981). Among these neighbourhood patterns are two distinguishable neighbourhood designs that have been identified since the late fifties, namely;

- the government agency layout (planned and registered by government)
- the private-layout (formal layout and registered by government, or informal layout and unregistered by government).

The private layouts seldom obtains government infrastructure and services for as long as ten years or more. Majority of services are obtained by residents associations’ contribution and tipping of government officials who distribute the infrastructure services legally (or illegally).

This study captures the occurrences of housing delivery systems based on the originating stakeholder typology. They are defined in terms of the housing development actors/partners identity in relation to their institutional or organizational (partnership) formations towards the households’ benefit. Three types of housing delivery systems identified in this study are as follows:

1. The public housing: This comprises the government layouts and houses built and sold or rented to government officials/public. Among households of public housing various arrangements occur; there are beneficiaries of government housing who rent out their boys

quarters (both in government housing, layouts and universities), beneficiaries of government housing who subdivide their primary housing for rental income, and those who co-habit with tenants they directly secure as separate from relatives who live with them (Aradeon,1981).

2. Private housing: Beneficiaries of private layouts go through near impossible situations to gain access and obtain legal titles. For many the dream of a legal title is unattainable as they end up losing money to fraudulent touts and corrupt government officials as well. Since buildable land is in short supply and the majority of available land is either under government acquisition (occasioned by the Land Use Decree/Act of 1978) most private housing are illegally developed on these government lands through the ownership rights of families and in turn they approach government for ratification.

This strategy has accounted for over 25% of developed land outside of Lagos Island referred to as Lagos mainland (principally the fringes of the city,FOS,2004)

**Figure 7.4** Map showing Lagos Mainland and Island



Source:www.googlemap.com

3.The informal housing; which accounts for up to 70% of the housing stock and continues to champion the course of housing delivery as the most effective production mechanism for the lower to middle-income group (FOS,2004).

**Figure 7.4B** Map showing detailed delineation of 20-LGA's of Lagos State



1-Agege 2-Ifako-Ijaiye 3-Alimosho 4-Ikeja 5-Shomolu 6-Kosofe 7-Ikorodu 8-Epe 9-Oshodi-Isolo 10-Mushin 11-Badagry 12-Ojo 13-Amuwo-Odofin 14-Ajeromi-Ifelodun 15-Surulere 16-Lagos Mainland 17-Lagos Island 18-Apapa 19-Eti-Osa 20-Ibeju-Lekki  
Metropolitan Lagos excludes 7,8,11 and 20  
Source:Lagos State Map,2010

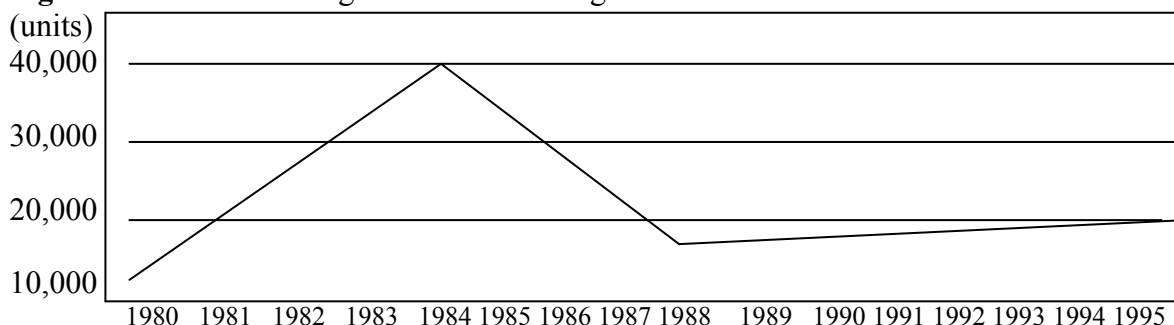
## 7.2 General Characteristics of the Housing Market

Ownership of a house is a dream realized in Lagos by only the upper 5% of the middle-income groups in Lagos (UNCHS, 1993). The middle-income groups as theoretically accepted are very misleading in Lagos. For example in the recent review of housing policy and strategy the middle-income beneficiaries was estimated at between Grade level 10 and 12 of the federal civil service and an average age of between 30-35 years is assumed for eligibility. This is against a city's profile where unemployment is over 60% (NBS, 2009), where the average waiting period of high school leavers to gain admission into university/post secondary institutions (from which he is expected to qualify into the income level of accessibility) is about 2-5 years (due to excessive population, high cut-off marks and quota system). More so, entry-level remuneration in government service as a first-degree university graduate is between Grade-level 8, which is below eligibility level of the housing policy of grade level 10-12. The expectation of financial ability within this market as occasioned and assumed by the housing policy becomes misleading. These disparities in the housing market of Lagos among others necessitated the following self-help actions by households' to deal with the situation outside of government; they include, rental and sale arrangement between actors/partners and households occupying public housing and private housing.

### (i) Rental arrangements scenarios:

In the public sector, government provides staff housing for employees from existing and new stock of housing. However, there are cases of government relocating her employees from GRA's and redeveloping part of the existing housing stock in the GRA's to increase density and reallocates to exclusive upper cadre employees and the upper class private business community. The recent intervention by government was to monetize existing housing stock to sitting staff and make tenants out of her employees before selling the housing units with rights of first refusal for outright purchase (called a 99 year long lease); or forfeit the housing to private sector speculators. These arrangements partly account for the steady decline in government housing stock and production between 1984 and 1988 as shown in figure 7.5.

**Figure 7.5** Public Housing Productions in Lagos State between 1980 and 1995



Source: LSDPC field survey in Windapo, 2005.

However, figure 7.5 shows stagnation in public housing production since 1990 as well and a marginal increase in housing production has been seen in the last 10 years of post democratic transition; but with increasing population and housing demands of the middle-income group, the housing shortfall amidst these housing arrangements remains a problem.

Similarly, in the Private sector, rental arrangement scenarios vary. Companies and individual businesses build housing estates for staff rental. There are also arrangements between prospective tenants that builds/redevelop and occupies the property (or part) over a period to amortize agreed investment or pays a less than market rental rates for a period to enable redevelopment. This involves the prospective tenant secures a long lease between 5-10 years (at least 5 years rental paid up front, to keep rents stable for rental period). The expatriate community and the upper-income class usually favour this option. There is the rental arrangement whereby a prospective tenant pays money upfront for a yet to be developed housing for rental purposes so as to secure fixed rental price at completion (with waiting periods of between six months and a year and sometimes more; a practice very common among the middle to low-income groups). In addition to the above scenarios is the arrangement whereby a prospective tenant teams up with friends or colleagues to rent and share the space (rooming, flat, bungalow etc). These are but a few decent arrangements between property owner and tenants' (rental arrangements in the housing market as it operates in the private sector). Others may not be relevant as they are arrangements below the echelon of the middle-low income earners that are not the focus of this research.

## **(ii) Ownership arrangement scenarios:**

The access to ownership arrangements vary as well in the Lagos housing market. There is the direct purchase of housing from available public and private stock (public and private sources and government corporate agencies). There is the directly built housing by owner-occupier (built on public layout or private layout-registered or not). There are other arrangements among allottees of public/private layouts. A scenario is the subdivision of a plot of land of about 1000 square meters into two equal halves and the one-half sold to meet the financial needs of the original allottee towards developing the remainder half-plot for personal use. This is in direct violation of the stipulated clauses contained in the certificate of occupancy issued to the owner as granted in the land rights from the Governor of Lagos state. More so, there is yet another scenario, which is the redevelopment of a plot into multi-residential family unit against the building activity regulation of not more than two single family units per plot of land. Usually this housing arrangement circumvents the building activity regulation by making the submitted approved drawings appear like the acceptable two units of single-family house but

the internal configuration is altered during construction to meet the housing development actor/partners' objective (in most cases profit motive).

### **7.3 The institutional and organizational arrangements in relation to social structure**

The actors/partners in the housing delivery process of Lagos are formal and non-formal. This forms the basis for the institutional and organizational arrangements that exist. However, the formal actors/partners are of immediate relevance to this research and grouped below based on the sector from which they perform their roles:

(a)-government and public-sector agencies: There are the federal, state, and local arms of government responsible statutorily for housing provision for its citizens. This institutional function occurs through the agencies of government described below:

-Federal Government: This comprises, FMHUD, FHA, FMBN, public-sector agencies and focused groups (army, navy, air-force, public-universities, police customs, immigrations, and other agencies). This comprises of their barracks and staff housing within and outside their original containment for designated housing. Most of these agencies have their housing within containment called estates for civilians or barracks for the armed forces.

-The State Government: This comprises, LSDPC, LSMH, and LBIC.

-The Local Government Area: Currently, they have no visible activities in direct housing provision. Since the Governor of the state orchestrates the entire process in violation of their statutory role.

(b)-private sector: These include direct and indirect involvement of actors/partners. Among the direct involvement actors/partners are Contractors, REDAN members, corporate and individual investors, and developers under no umbrella name. The indirect involvement of actors/partners are the housing finance institutions comprising, PMI's, commercial banks, micro-finance companies, and capital market based institutions.

It is from these listings that evaluation for actors/partners activities originate. Therefore, the contribution of PPP in Lagos towards the provision of adequate housing draws from the activity based institutions and their interaction with society. The contexts for these interactions are socio-economic and socio-political relationships and they are characteristic of partnerships that exist in capitalist democracy at the institutional level. However, implicitly the organizational arrangements, which exist, are largely socialist in nature. For example, the household size for central Lagos and environ shows that government policies favour the single-family house provision as its planned objective. Unfortunately, socio-cultural arrangements among households negate this objective. This is evident in the nucleated housing development schemes in Lagos by housing development actors/partners and remains a symbol of lack of

comprehensive planning. This has given the wholesome opportunity to housing development actors/partners to exploit the housing situation in various ways. The most obvious is the selective accumulation of surplus value among owners who rent out housing and buyers who have exclusive access to housing allocation due to their socio-economic and socio-political positioning in Lagos. This is suggestive of existing but parallel sub-market of some sort that is always an alternative among households irrespective of the policy framework in place.

In these arrangements, the most visible and favored neighbourhood living pattern is the estate type. It connotes an exclusive lifestyle, and is supportive of European based aspirations. Whereby most city-based problems could be contained within a smaller gated community. For example, it is easier for estates to obtain water and electricity than for single individuals along unknown development corridors.

This estate development pattern took its origins from the exclusive lifestyle of the colonial expatriates who once created the GRA's as public housing neighbourhoods and development corridor. Then, the private sector followed suit in creating exclusive neighbourhoods for the working class and the middle-income group. Private estates such as Palm grove were one of the earliest along the Ikorodu road that served as the main feeder road into Lagos and around Western Nigeria.

These estates consist of a land mass separated from the rest of the community by a physical fence and subdivided into smaller plots. Usually it may or may not be a serviced site. This is dependent on the level of financial access the housing development actor/partner has and the nature of end-users ability to pay for the services. They could be cooperatives (such as cooperative villa, Badore (along the Lekki-corridor Southeast of Lagos), or they can be strictly investor's initiatives where the individuals were unknown to themselves.

Therefore, from the various possibilities among actors/partners which is ever evolving this research aggregated existing typologies of arrangement which focuses on the delivered housing (estates). It is from these housing estates that housing development actors/partners currently derive maximum value based on the reforms of the guiding institutions and the changing living patterns, which elucidate social arrangements. This study identified four of such estate typologies and discussed them extensively in this chapter.



#### **7.4 The Concept of Value and Housing Delivery Systems**

Lagos is a commercial hub and driven by profit motive on all front of its society including housing development. Unfortunately, housing is largely an opportunistic chain of original sales/allocation to the third beneficiary over a period of less than 10years in most cases (field survey). These rapid changes in ownership exist without formal government records (land registry/deeds office). This is due to the cumbersomeness of the procedure and the huge cost needed to execute changes in title with government agencies. Most change of ownership transactions circumvents regulatory process by having a ‘gentle-mans’ arrangement at the point of sale; such that the original allottee signs-off blank documents that are transferrable over time from one new owner to the other. It is usually the owners who have a dire need to register the title that ends up filling in their names and proceed to make the tortuous journey to government (to apply for governors consent, or a deed of sublease granted by the governor). It is from this point that government would actually have a record of sale.

Most times, upon presentation of the unregistered documents banks go as far as verifying original allottee and commits the fourth or fifth (i.e. current) beneficiary to sign off un-executed legal mortgage and grant loans and other financial facilities on a discretion basis without properly secured original title. The consequent risk effect is often fatal and even then, it remains a standard practice.

Therefore, it goes without saying that, a land with transferable title is more expensive and easier to sell; the same applies to existing housing stock. In some instances, the existing housing stock belonging to government and its agencies do not have transferable documents except for letters of allocation from government. The trustworthiness of government as an institution makes the housing transferable; especially to a desperate buyer (which is usually the case in housing exchange among households in Lagos).

The general concept of value, which drives the housing market, emanates from the acute short supply of housing and the heavy demand for affordable housing within government layout and private layout. Infrastructural Services (water, electricity, and good-tarred road) are not necessarily items, which drive value among the middle/low income groups. The fear of illogically increased rents usually drives the working class to secure their future within the Lagos housing markets, since an inability to achieve this may disorganize their employment, which is the only source of livelihood for the now.

The disparity in rental and sale value between various neighbourhoods is often misunderstood. For example, It is possible to rent a 3-bedroom flat with basic government services in Victoria Island, for N850, 000 per annum as well as N6million per annum or more. It depends on the following factors:

-Who is renting? The higher rents are obtainable if rental is by a corporate conglomerate, which is an expatriate, or an indigene that has affiliations with the owner or through whom the owner stands to benefit.

-Who is marketing the rental? The higher rental is cannot be obtained if a local agent without expatriate network attempts to rent out such housing. However, there is solidarity among the expatriate community among whom the demand originates to succumb to higher rentals with confidence. In most cases, the expatriates' are willing to pay that much are in alliance with government based businesses from which they morally owe their local partners such favours to rent and pay much more than market value. Alternatively, live within neighbourhoods and housing schemes that are overpriced but serve the exclusive preserve of the expatriate community. Therefore, to develop housing and believe that such benchmarks are achievable, as return on investment has led many developers within Lagos into bankruptcy as they are often unable to replicate such investment feats.

Currently, there is abundance of over-priced lands and housing in Lagos metropolis. This is an offshoot of financial institutions divesting into real estate as their main stay for safe guarding investment. Unfortunately, the sudden global economic meltdown makes for paucity of funding among households and banks are not lending for real estate purposes since they do not have long-term funds. (A lack of long-term foreign funds, high oil prices that is the main stay of local economy and high cost of living for a country that is largely consumer based).

Therefore, when benchmarking affordability the idea that government would wield its powers to achieve and distribute housing for between N1.6million and N3.5million is a wishful thought. The value, which this policy places on the employee, increases the risk of failure of planned objectives. This is because the housing exchange in terms of demand and supply is the source of market value for housing. More so, by defining the source of housing to emanate from beneficiaries of government employment alone (as the only secure way of distributing housing) sets the stage for dire consequences in that the employee goes into housing racketeering by default (to accumulate surplus value).

The current concept of value in housing is largely caucus-based in its entirety. The social focus groups, which exist within clicks dictate the market value intrinsically among the high-income groups, the middle-income is more relative to the forces of demand and supply. It is in the variety of caucuses that the social focus groups tends to exploit and re-invent itself by formulating fresh ways to adapt and benefit in spite of prevailing trends and policies. This phenomenon at the urban scale continues to reflect specialized segmentations of the city away from the original segmentations of indigenous and colonial urban housing delivery systems of the past.

There is an existing market value segmentation of housing which the current policy fails to address yet it influences every known policy that have existed. The GRA possesses and connotes a market value irrespective of the quality of housing.

Similarly, the older indigenous estates and government layouts connote another level of market value. However, market value of housing is further skewed as housing estates developed by expatriates also connotes a certain kind of obvious value as different from the one developed by indigenes as observed in Victoria garden city (VGC) versus Lekki phase-one (late 1980's). While VGC was a privately developed estate by expatriates, Lekki phase-one was developed by Lagos state government. VGC was over twenty kilometers from Lekki phase-one which was closer to the Victoria island CBD. Yet VGC sold out by off-plan sale and Lekki-phase-one slowly sold by allocation to government employees (majorly) for about 50% the price of VGC.

More recently, the indigenized company, UAC property development company (UPDC), attracted over ₦30 billion in a public offer of its stocks in 2010. This is due to its expatriate history and antecedents in farm produce exports: By diversifying into real estate, they have swept the market share and have remained market leaders.

Therefore, it is obvious that there are sensibilities attached to market value of housing in Nigeria. The housing-market agent's of transaction, the housing typology and historic antecedents of location/precinct, and the credibility of the actors/partners inform the value of housing irrespective of the generalized price mechanism which exist in the HDS of Lagos. This is against the backdrop of the landed value, which is obtuse due to poor planning, and disparate sources of construction cost (computed from material, labour, overhead, and profit). This value differential becomes a source of strength for PPP's since other types of value are acceptable for housing exchange in the housing market of Lagos. This shortcoming could be explored to benefit households and to improve coalitions among actors/partners and PPP outcomes.

### 7.5 Coalitions and Classifications in the Housing Market

The following strong ties of coalition among actors are identified; the real estate developers association (REDAN), mortgage bankers association of Nigeria (MBAN), building material marketers association of Nigeria (BMAN), the housing cooperatives, associations of professionals (whose professional associations seek to alleviate members housing problems) through direct application to government. Also, the recently displaced residents of various government housing in Lagos due to the monetization of housing allowances for government employees resulted in the affected persons been encouraged to form housing cooperatives; about 200 members are all taking advantage of the cooperative strategy. It is observed that, due to building regulation issues and funding arrangements' and disagreements in choice of HDS model among cooperative members; they are yet to achieve their housing objectives ten years after forceful eviction due to government monetization policy of rents to employees rather than housing provision (field survey/interview).

The most formal of these strategies involves the formation of a registered voluntary organization as a cooperative. Then, the association may seek directly from government for buildable land for housing or from family landowners (both are usually outside the city limits or the nearby Ogun state; since Lagos has overgrown its limits). It is from this point the cooperative may seek funding through a developer (REDAN member) who through the PMI's (mortgage banks) would apply for developers loan based on the contribution and repayment capabilities of members of the cooperative into the NHF. Usually a limit of not more than N5million is granted by FMBN (recently reviewed to N15million in 2010). This type of coalitions are beginning to achieve results even though the housing provided are never within the city limits of Lagos which is highly profit driven and less practical for those working within the city due to commuting bottlenecks.

The alternative within the city limits is the development of high-class housing for the upper class to be rented most times to the expatriate community. This involves demolition of the existing single family house on one acre or less and erecting a high rise of over 10 floors which could accommodate up to 20 families in strictly European styled settings.(of single-family housing typology with a single room boys-quarters which reflects the colonial adaptation for functional reasons as servants quarters).

These coalitions exist in three broad categories of dwelling units within Lagos namely;

- the single homes
- the flats

-the rooms (rooming/face to face)

Studies show three out of every four households in Lagos are living in the rooming-type housing (UNCHS, 1993). This is considered as informal in the private sector housing delivery system.

This research is of the opinion that a review in the design approach to meet the demands of the upwardly mobile middle-income class may change the level of social acceptance among this group. Unfortunately, the coalitions that exist have not expressed newer dimensions of the rooming house form as an option in the housing market. The coalitions that inform the HDS of Lagos still offer early post-colonial spatial-designs, which at best is a copy: A copy of colonial embellishments to meet designer's perceptions of exterior standard for acceptance. Figure 7.6 shows a typical adaptation of design embellishment that is common in comparison to the colonial period. Such adaptive re-use of characterization implies minimalism and syncretism as previously discussed. The crafts-manship, which goes into the Maja house, is evidently absent in the housing in Crown Court Estate. Within the prescribed single-family house form in Lagos, the apogee of housing aspiration remains ownership in terms of tenure and a detached house in terms of typology. Coalitions tend to favour this trend and it is reflected in design.

**Figure 7.6** Typical exterior corner detail, a proof of existing architectural characterization reminiscent of a forerunner elite life style. Workmanship/detailing evidently lacking in the architectural copy of today.



**Left**-The Maja House on Garber square,Lagos;circa 1940's  
Source(Aradeon,1996)



**Right**-House at Crown Court Estate:A private estate development.circa 2000.Source(Survey photo,2010)

## **7.6 The Existing Public-Private Partnership Programmes**

The initiation of PPP programmes is principally by government. Since the power to formulate and establish the framework lies with government. In this regard there has been a lot of excitement about PPP based housing in Lagos with very little to show for it.

The enabling framework/environment has odds stacked against its existence in line with global theories of PPP. For example, the limitation posed by existing over development conditions means only redevelopment within the metropolitan Lagos would be feasible; the implication is such that a single family house on single lot in a given neighbourhood would need to be turned into a multi-family complex as a single lot or a combination of lots along a street. This would involve changes in organizational and institutional arrangements; as the needed changes in legislation and changes in the social symbol of such individualized housing maybe difficult to overcome. Yet it is evident that certain forms of coalition have allowed rapid informal developments, which have now taken center stage; such as multi-nucleated housing development, of estates within estates and government layouts arbitrarily.

An earlier Colonial government layout was about 2000-4000square meters per single-family house, for GRA's. While between 400-600square meters was the norm for indigenous middle income government workers as seen in the Ebutte-Metta and Surulere housing schemes; this has been upheld for a while until the late 1970's to early 1980's when government layouts were re-sized to between 800-1200square meters per single family allocation (with an allowable not more than two family units). However, more recently, most layouts catering for the middle to lower income groups around the city and its immediate fringes ranges from between 300-500square meters on the average within a confined housing estate. Such acceptance of living style shows to what extent the average dweller would compromise familiar and acceptable housing values to achieve their housing goals of which security against homelessness is currently uppermost.

In the public sector, the Lagos State Ministry of Housing was set up to cater for direct state intervention housing programmes aside from the LSDPC commercial based housing machinery which has always been in place for the state government. Both institutions are unable to provide housing, which meets the target price criteria as stipulated by the national housing policy framework of 1992, and revised 2004 (which must not exceed N5million until 2010 when it was revised to N15million).

Basically subsidized commercial housing is often provided and allocated to a few at the inception of the housing programme after the launch by government/its agency; and it takes another 2-3 years before actualization and most allottees are not first time home owners (of both public and private sector beneficiaries). The partnership patterns are poorly defined and the following have been termed as partnerships:

-Where government provides the land for private developer at a subsidized rate and the developer sources its funding arrangement for the development. Such funding arrangements may differ from that of the submitted document to government as often times the monitoring of these partnerships are very weak or non-existent (excluding all other unwritten charges paid in cash and kind by the developer to government officials to secure such exclusive rights/privilege) and the developer have to recover cost from the benefiting public.

Therefore, given this most popular scenario the context of partnerships as conceptualized (by World Bank and UN Habitat) is yet to take roots in public circles. The reality of government not getting involved with the building process is still not readily acceptable by stakeholders of legislation and governance (institutional stakeholders). Since their direct participation often enables them benefit (directly/indirectly), from the housing process (from allocation of land or financially through government financed projects).

It is observed now that most government institutions' are free to utilize government subvention for acquisition of land and funding of post-service (retirement from civil service) housing scheme. These schemes are often originated with government exemptions from regulatory framework while the bulk of housing produced is then sold to the private sector (examples are army, police, navy ,air-force post service schemes union of teachers, university academic staff unions etc). Most of which started out utilizing policy frameworks for social housing or public-private partnership. Even in the private sector, land has been acquired on the PPP platform and cooperatives formulated and the outcomes have been commercialization and justified by cost of construction and general inflation index (field study/interviews).

### **7.7 The Influences of Institutional and Organizational Arrangements**

From the analysis and review of relevant literatures, it is evident that the existing arrangements among stakeholders have significant influence on the housing delivery systems. The measurable bases are more visible through the evaluation of the housing stock, the state of the housing stock and the housing environment.

### **7.7.1 On the Quantity of Housing Production**

It is evident that the framework available to institutions is to increase the housing stock. This was not achieved through the numerous housing reforms; but such reforms influenced the housing markets and housing values implicitly. They also infused relief to lucky beneficiaries that were randomly selected (Aradeon, 1978, 1991): Since the streamlined nature of public policy favours those in governance, who are usually first to know and are rightly positioned to benefit. This leaves the larger public sector trailing behind; and they start benefiting where the government officials left off. This trend remains the major factor for the lopsidedness seen in the Lagos housing market.

However, with such enormous funds and lopsided housing programmes benefitting a few, the housing stock is largely supplied by the private sector as they continue to experience unabated profitability due to inept policies for which the private sector have always found ways to circumvent. Until date, the private sector (informal and formal) continues to produce over 90% of housing stock in Lagos (FOS, 2006) with little incentive and recognition by government.

### **7.7.2 On the Quality of Housing Production**

The quality of housing stock provided by the private sector is in relation to affordability and market mechanisms. While those provided by the public sector is in relation to regimes of governance. Since, the housing was a product of economic settings that have influenced the pathway chosen to achieve target housing. The colonial housing had unrestricted access to imported material at a cost decided by the colonial government; this is evident in the quality and structural soundness of the buildings. More so, construction then was for a few of the population (expatriates) and the upper middle-income group. While the bulk of society used ad hoc methods to achieve their housing production. It is obvious from the study that, the best planning, design, and construction practices within the colonial era were used to achieve results as expected. The standards from which the ideas informed the conception were drawn from proven models of Europe, which constantly infused research, and the consequent emergence of 'tropical architecture' as a tropical interpretation of the modern architecture movement. The production of housing here was faced with issues of adaptation rather than minimalism. Sumptuous spaces, aesthetics, and good craftsmanship were the hallmark of the colonial architecture within the constraints of weather/climatic conditions.

While the 1970's and the oil boom experienced the rapid reconstruction from the civil war and modernism on all front alongside proliferation of government estates/housing corporation



estates and private estates; the quality was basically achieved due to the availability of funds and limited patronage by the public and remainder skills that spilled over from the colonial era. Since the emerging market revolved around a small middle-income group by global standards (in the public and private sector; and they were the beneficiaries of these housing). Much of the demonstration of syncretism took roots in this era as local architects began to emerge with various international viewpoints to the architecture of housing from which they formulated their styles and interpreted housing function.

Unfortunately, by the 1980's, the housing desperation had began to peak as the relevance of home ownership in Lagos became a national issue and not just social. In terms of socio-political locus and identity as the seat of power and where commerce resides. There was an evident need to be in touch with emerging globalization from Lagos and the ease with which the average Nigerian can fraternize and benefit from national largesse. Unfortunately, dwindling government funds for housing (due to weakening Naira and not the amount of Naira spent) has consistently rising against the importation of building materials (and the weakening Naira has not helped much).

More so, increasing housing demand placed a pressure on subsequent government regimes to seek faster and alternative means to actualize housing production. This process brought about falling standards as political will and the necessity for housing was more essential to the detriment of quality, (President Shagari housing of 1983 and some of Governor Jakande housing of 1980 are good examples at Federal and state government level of housing intervention). This period set the stage for the interplay between minimalism, adaptivism, and syncretism into an emerging functional-syncretism. Stakeholders simply experimented with whatever works for them at all levels of governance until this day. HDS became a proliferation of activities that led to housing production.

At the federal and state government levels, the housing projects came at a project-cost that was below expatriate profitability. Except for the housing of top-most government functionaries all other housing are classified as middle-income and below. The construction was achieved through indigenous small-scale portfolio contractors and many housing schemes became poorly built in terms of previously accepted colonial standards. In some cases, the beneficiary of this subsidized housing was willing to fund the upgrade for personal use or outright disposal in the open housing market. The effect of this is that the private sector has taken advantage of such fallen standards to produce poor quality housing among the middle to low-income groups and they literarily go unchallenged.

### **7.7.3 On the Quality of Housing Environment (quality of life/lifestyle)**

This is the setting for the housing and two layout types of neighbourhoods in Lagos are used analytically. They are the government layout and the private layout. The government layout has the basic infrastructure but the maintenance is usually ineffective, as government never funds the maintenance regularly. More so, the disparity in income levels among dwellers in these government layouts creates a limitation to self-help collaboration towards achieving sustainable maintenance. The amount of funding to discharge with maintenance and desired housing environment as envisioned is usually too capital intensive. Therefore, most government layouts though aristocratic in setting become poorly maintained. There is the needed institutional support, which does not exist for now: Both in legislation and financing (direct or indirect) through mandatory insurances for building maintenance regulations.

As for the private sector housing layouts, it is characterized by coalitions of associations among residents (irrespective of tenure). Even though this is not supported by any known formal legislation, the association and communal effect of society has a strong defining force on member residents and their wards. Through this method they are able to enforce financial contributions towards maintaining their housing environment (such as cleaning of drainage, paying for private security patrol service in gated estates and compulsory gifts to the police for surveillance and response when needed; usually the setting is the village meeting style irrespective of neighbourhood). The nature of the housing environment is such that lifestyle plays a lot of role in determining the outlook. Since commerce is a main stay of the average household, the single-family house form fulfills a variety of roles for the nuclear and extended family; such as extended veranda's which serve as shop fronts or gate houses used as hair dressing saloon/shop etc. It is within these arrangements that the failure of the actual spatial use in the city is reflected in the housing environment.

This is traceable to the impotence of development control and the ever-changing rules, which are at the discretion of the local planning officer. These groups of persons (within the institutional framework for housing) often ignored in the development process of policies are heavily relied upon during the implementation process of such policies. Often times their perception and interpretation of housing environment is questionable. Although their powers are limited against the backdrop of more powerful residents' association (households) among actors/partners (who have the capacity to sway due process and have their way) nonetheless, they are essential to the visual outcome of the housing environment.

Essentially, the nature of the services provided within the housing environment by this rapid self-help commercialization on every plot (though not acceptable by the majority) is generally patronized (by the majority, and socially too) as the commercial services (like selling of milk, soap, etc) become handy to households in every neighbourhood. Through this means, dependent relatives are encouraged to earn a living through activities such as, roasting plantain or corn, plaiting hair etc (Aradeon, 1981).

## 7.8 Review of Four Housing Estate Typologies Surveyed:

### 7.8.1. Typology-I, Public Housing Estate; Abraham Adesanya estate:

The estate is located along the Lagos-Epe expressway on the southeast axis of Lagos. It is a public estate established by the Lagos state ministry of housing about 1996. It is geo-politically located in Ibeju-Lekki local government area, one of the twenty-local governments of Lagos state officially acknowledged by the federal government of Nigeria. The local government population is about 99,540 (LASG, 2006). The estate was established as a medium-income housing estate. The research based its survey on the about 572 units of two and three-bedroom single-family housing within the phase one-development of the estate (see figure 7.7D1-4 for pictorial general overview). More units have been developed through other development arrangements between the Lagos state ministry of housing and housing development actors/partners. Figure 7.7A is the relative location on the Lekki development axis, and figure 7.7B is the entire extent of the estate layout. This public estate is gridiron planned as in figure 7.7C while the individual units are on allotted plots; each housing unit occupies about 300sqm of land area with setbacks 3m on the sides, rear, and 6m in front to the main road.

**Figure 7.7A** -Location of Estate



Source. [www.googlemap.com](http://www.googlemap.com)

\*The estate is located along the main expressway between Lagos and Epe town.

Figures 7.7D 1-4 gives a pictorial overview of the estate and shows the extent of maintenance and general state of the quality of housing environment.

**Figure 7.7B-Layout of Estate**

Source:www.googlemap.com

**Figure 7.7C- Grid-iron planning of layout**

Source:www.googlemap.com

**Figure 7.7D Field Survey Photos (D-1 and 2)**

Figure 7.7D-1. An abandoned car with deflated car tyre shows a lack of maintenance, open drainage and undulating sidewalk underscores quality of environment



Figure 7.7D-2. Deplorable state of the roads within phase-2.A poor institutional outcome of housing



**Figure 7.7D Field Survey Photos (D-3 and 4)**

Figure 7.7D-3 Waste collection as an estate management practice shows an operational organizational system at the households' level.

Sources: Field survey/Author

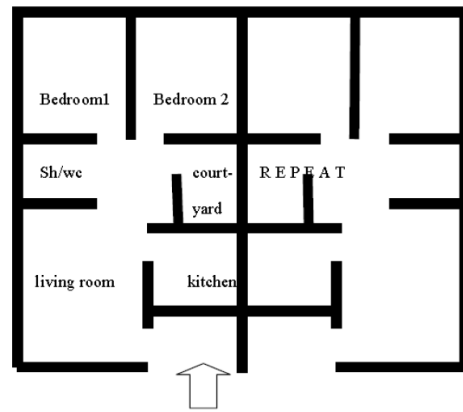


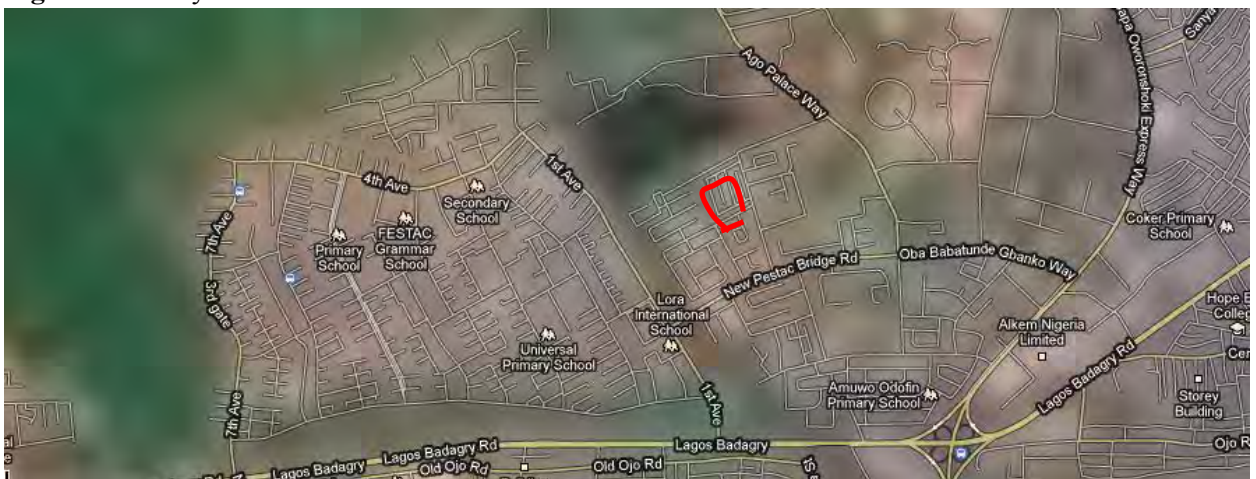
Figure 7.7D-4 A typical two-bedroom bungalow plan; 2nos units per block

### 7.8.2 Typology-II, Public Corporate Estate; Raji Rasaki Estate:

This estate is located off the Badagry expressway on the south-west axis of Lagos. It is a public-corporate estate established by a corporate agency of Lagos state, Lagos State Property Development Company (LSDPC) about 1995 as a medium-income housing scheme.

**Figure 7.8A-Location of Estate**

[www.googlemap.com](http://www.googlemap.com)

**Figure 7.8B-Layout of Estate**

[www.googlemap.com](http://www.googlemap.com)

This comprises of about 142 single-family, semi-detached houses of 4-bedrooms each. The local government covering this location is Amuwo-Odofin local government area with a population of about 524,971 persons (LASG, 2006). Figure 7.8A shows the location on the south-west axis, and contextually in figure 7.8B while figure 7.8C is the layout and extent of the gridiron development. Figure 7.8D shows the extent of a plot that contains two single families: In reality, the space at the rear contains a boy's quarter unit. This is large enough to accommodate an additional family; occupancy of each unit averagely 8-persons from field survey. Figure 7.8E-1-3 is a general pictorial overview of the estate, showing the scale and ambience of the development slightly above that of the public estate typology.

**Figure 7.8C-Grid-iron Planning of Layout**



[www.googlemap.com](http://www.googlemap.com)

Note: In red is the limit of estate; perimeter boundary fence.



**Figure 7.8D**-Extent of development per plot in yellow



www.googlemap.com

Note: In yellow is the limit of duplex perimeter boundary fence.

**Figure 7.8E** Field Survey Photos (E-1)



**Figure 7.8E-1:** Street view of the estate; absence of side walks, and a confined sense of place delineated by security-perimeter fence walls within each plot/building unit

**Figure 7.8E** Field Survey Photos (E-2 and 3)



**Figure 7.8E-2:** Street parking shows both inadequate and not so convenient internalized parking; waste bin indicates organizational arrangement within estate. Collection technique obviously random from bin type.



**Figure 7.8E-3:** Independence in housing upgrade; unit to the left shows upgrade and unit to the right shows lack of maintenance. Architectural identity is of importance to households, yet such environmental quality shows poor regulatory framework.

Source: field survey/Author

**7.8.3 Typology-III, Private Housing Estate; Crown Estate:** It is located on the southeast axis of Lagos, off the Epe expressway as shown in figure 7.9A. The layout of the estate is directly fed from the expressway as shown in figure 7.9B; 'A' is the estate extent and B-F shows various levels of development of the adjoining properties, which are currently owned by land speculators and fenced usually. To the left of this estate from figure 7.9A is Abraham Adesanya estate a public estate that obviously gave the needed investment confidence to the private developer to initiate a housing project along this axis. Two factors, location of the public estate and the Lagos-Epe expressways (infrastructure) are critical to the private sector decision. From figure 7.9B the estate is sparsely built up for several reasons; distance from the Lagos CBD, where most middle-income groups have their employment, cost of such development outside the city limits, and ease of commuting. Desperation of households for



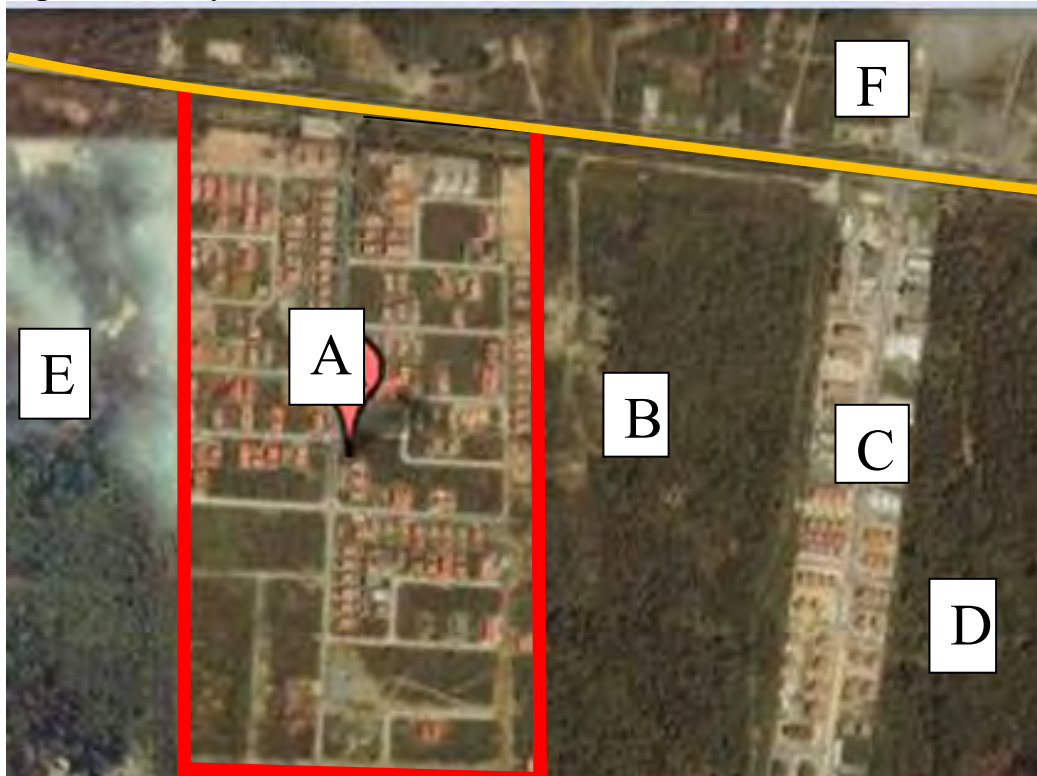
housing security is a driver to the success of such private estates. There are individual units as shown in figure 7.9B-‘F’, and other nucleated developments as in figure 7.9B-‘C’.

**Figure 7.9A-Location of Estate**



source:www.googlemap.com

**Figure 7.9B-Layout of Estate**



Source:www.googlemap.com

A- crown estate, B-vacant land already speculated upon,C- a developed estate,D-vacant land and E-Abraham adesanya estate and F- nucleated development of family scale traditional development.

**Figure 7.9C-Grid-iron planning of Layout**



Source:www.googlemap.com

**Figure 7.9D Field Survey Photos**



Figure 7.9D-1: Strict adherence to building regulation, use of interlocking paving stones, large sized housing, and free-styled designs with restricted height.



Figure 7.9D-2: Absence of functional sidewalks, closed drainage, better state of infrastructure than public estates. Private estates remained owned by developer and instills better restraints on households indiscretion to use of property.



Figure 7.9D-3: Architectural style is an outcome of households' preference, while building regulation informs design in terms of adapting space-defined activity into cultural milieu.(which is now syncretism for the affluent able to afford housing in private estates)

Source: Field survey/Author

#### **7.8.4 Typology-IV, Public-Private Partnership Housing Estate; Elegant Court Estate:**

The estate is the known PPP estate that achieved practical completion in 2010 since the establishment of the Lagos State Ministry of Housing as the public partner. It is located off the south-west axis of Lagos –Epe express way about three kilometers inwards. However, the PPP partners' marketing brochure describes it as directly on the Lagos-Epe expressway (see figure 7.10D and compare to the google map actual location of the estate). Such misleading information is to encourage patronage from unsuspecting households. This point to the importance of estate location in Lagos housing from household viewpoint as discussed in the



literature and data obtained from survey. The estate comprises of 72 units of single-family housing and three-bedrooms each in blocks of flats. Figure 7.10A shows the location and Figure 7.10B shows in relation to context.

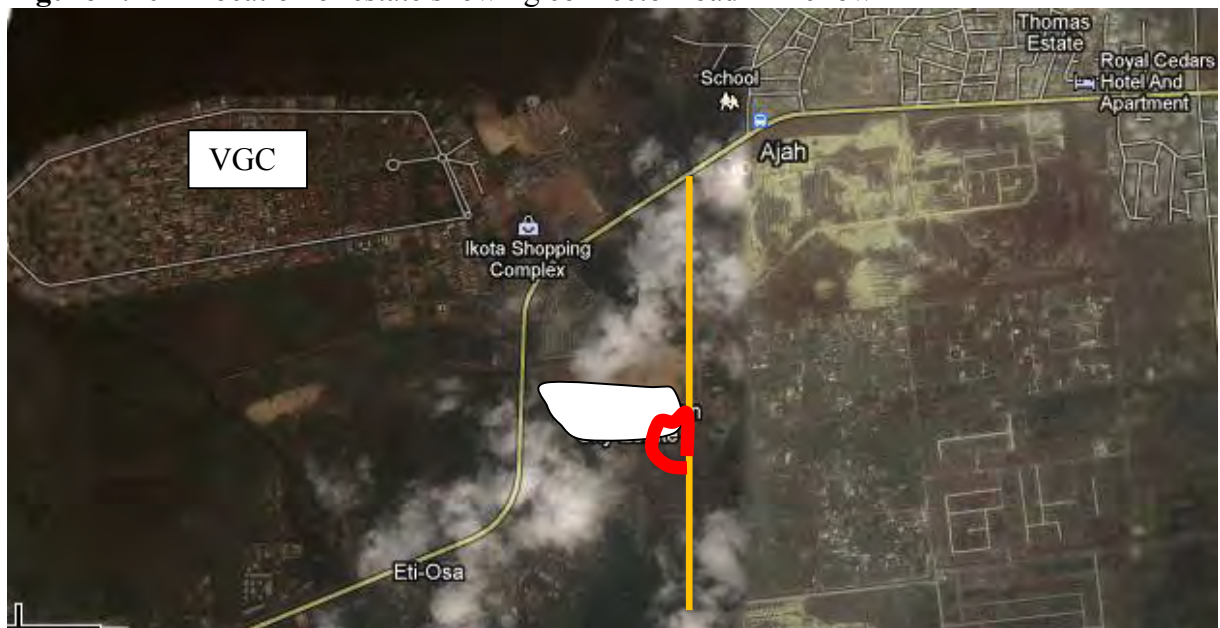
**Figure 7.10A-Location of Estate**



Source:www.googlemap.com

Figure 7.10C is a close-up of the entire layout showing extent of the estate carved out from an irregular and traditionally developed area (an existing settlement) which succors the housing pressure from the city.

**Figure 7.10B-Location of estate showing connector road in Yellow**



Source:www.googlemap.com

The secondary connector road (in yellow, figure 7.10B) leads to a Mobil Oil staff housing; and the infrastructure on this axis was brought to bear with the institutional and organizational arrangement of Mobil oil and the state government. Details are not available to this research; such arrangements influenced individuals to seek single-family plot of lands from the family landowners around to benefit indirectly from infrastructure provision. Hence, the traditional nucleated development to the immediate left of the estate from which this PPP estate emanated.

**Figure 7.10C-Estate Layout**

Source: [www.googlemap.com](http://www.googlemap.com)

All four housing estate development typologies are in direct relation to existing road network, which is the major infrastructure; and for three estates' typology, proximity to existing public estate was a major factor for project conception and initiation. From the foregoing, it becomes evident that actors/partners need to create their mini-institution to meet services requirements of the housing estate they intend to develop. Although, these services promised are never achieved especially for middle-income housing. Figure 7.9E shows a list of promises that may not be fulfilled in full; and if provided there is no method of ensuring the adequacy and the lifecycle arrangement for maintenance of the facilities. The development of blocks of flats or terraces in PPP housing is usually connected to ROI derived from increased density and the limitation posed by the inner-city to accessible land from which PPP's can be effective. The use of PPP as a model for housing delivery among indigenous private partners is based on the use of intermediate technology, which is the norm. Attempts to increase housing production rapidly with high technology have proven to be less cost effective given the poor supportive social structure and infrastructure to such imported technology and expertise.

Figure 7.10D-Actor/partners' Marketing brochure



Figure 7.10E- List of Facilities promised by Housing Development Actor/Partner

### SPECIAL FEATURES

- Perimeter Fence
- Swimming Pool
- Basketball & Lawn Tennis Court
- Playground/Green Area
- Launderette (per Block)
- Fitted Kitchen
- Bullet-proof Main Door
- Well Lit Lawns
- Ample Parking Space
- Intercom
- En-suite Maid's Room
- Shopping Mall (2Floors)
- Central Sewage System
- Central Cooking Gas Storage And Distribution
- Fully Air Conditioned Apartments
- Well Equipped Library
- Armed Security Personnel
- Gymnasium
- Central Alternative Power Supply
- Internet Access



SHOPPING MALL/GYMNASIUM/LIBRARY

- Central Water Treatment
- Water hydrant



## Figure 7.10F Field Survey Photos



Figure 7.10F-1: Construction phase-use of intermediate technology a common practice by local contractors (non-expatriate)



Figure 7.10F-2: Completion phase-use of bamboo as scaffolding and finishings are imported materials



Figure 7.10F-3 An architectural rendering of the promised estate; often never achieved due to techniques used and issues of ROI for private partner.

Source: Elegant Court Estate

**Figure 7.10G** Redefining Adequacy in terms of the 3-Qfactor rather than social aspiration alone (syncretism)



Housing typology 1,2,3,and 4 represents public, public-corporate, private and public-private estates; The picture on top is a western styled single family house within its setting. This is descriptive of social aspiration of the middle-income household and indeed all. However, the achievement of this as a set prospect for adequacy from the four estate typologies discussed and pictorially reviewed remains elusive. Government policy and finance alone did not achieve adequacy in the west. It required a housing system as posited by this study, a system which generates its improvements when the stakeholders are delineated at all levels, and resources and processes are prioritized for all levels of the institutional and organizational arrangements. Therefore ,to transit into adequacy from where the housing of Lagos currently exist, this study provides fresh insight into the necessary paradigm shifts which must occur before evident changes would be visible in the direction of adequacy through PPP as a socially relevant mechanism for housing delivery. **(Necessity and syncretism driven middle-income housing)** \*(pictures 1-4, field survey)

Source:Author

\*Basically, necessity and syncretism driven middle-income housing as captured in the analysis of this study is functional-syncretism. This is an outcome of an interplay between the elements of the 3-Q factor,the attributes of housing and the influencing theories of design defined by historic and socio-economic conditions namely minimalism,adaptivism and syncretism.It is not unusual for experts to delineate their design preferences in functional ways that are syncretic.

## CHAPTER EIGHT: PRESENTATION OF DATA, ANALYSIS, FINDINGS, AND DISCUSSIONS

### 8.1 Introduction

Questionnaires A, B, and C represents respondents from households, housing development actors/partners and housing experts respectively and data obtained were collated presented, analyzed and discussed. The data was sorted, summarized, and the inferences that emanated formed the basis for discussion below. Testing of the hypotheses, using Epi-info3.5.1 and SPSS 15 (both social science statistical software) enabled the conclusions drawn.

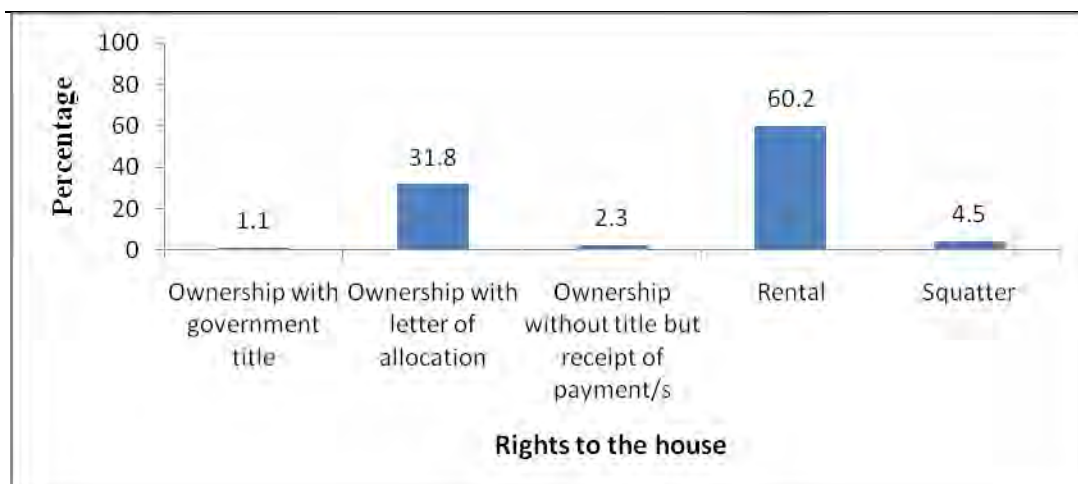
### 8.2 Presentation of Data

The data obtained are presented in the following order; respondents questionnaires A, B, and C representing data obtained from Households, Housing Development actors/partners and Housing Development Experts respectively.

#### 8.2.1 The Households (Questionnaire-A/VA: Estate Typologies 1-4)

**8.2.1.1 Tenure (VA-1):** The study sought to find types of tenure arrangements existing among respondents and results presented in figure 8.1. It shows that 60.2% of the respondents were rental tenure. 1.1% have full government ownership titles in form of certificate of occupancy or deed of sub-lease. The majority of owners only have a letter of allocation for properties they have bought in the last ten years represented by 31.8% of the respondents. 2.3% of respondents have ownership tenure with receipt of purchase only. 4.5% of respondents have ownership tenure with receipt of purchase only.

**Figure 8.1:** Tenure-Respondent's rights to the house (n = 88)





### 8.2.1.2 Socio-Demographic Characteristics of Respondents (VA-2,3,4,6,12,13)

This comprises of the following variables; Age(VA-2), Gender(VA-3), Marital status(VA-4), Household size(VA-6): Religion(VA-12) Geo-political origins(VA- 13)

This study sought to find socio-demographic characteristics of respondents and results presented in table 8.1. It shows that among respondents 48.9% of households are aged between 31-40years old. While 85.2% of these are, male respondents and 75% of these respondents are married. 75% are from the southwestern Nigeria, 89.8% of respondents are Christians, and 70.5% of family sizes are 5 person or less.

**Table 8.1:** Socio-demographic characteristics of respondents

| Variable                          | Frequency (n = 88) | Percent    |
|-----------------------------------|--------------------|------------|
| <b>Age (year) VA-2</b>            |                    |            |
| < 30                              | 13                 | 14.8       |
| 31 – 40                           | 43                 | 48.9       |
| 41 – 50                           | 28                 | 31.8       |
| 51 – 65                           | 2                  | 2.3        |
| > 65                              | 2                  | 2.3        |
| <b>Total</b>                      | <b>88</b>          | <b>100</b> |
| <b>Sex VA-3</b>                   |                    |            |
| Male                              | 75                 | 85.2       |
| Female                            | 13                 | 14.8       |
| <b>Total</b>                      | <b>88</b>          | <b>100</b> |
| <b>Marital status VA-4</b>        |                    |            |
| Single                            | 17                 | 19.3       |
| Married                           | 66                 | 75.0       |
| Separated/Divorced                | 2                  | 2.3        |
| Widowed                           | 3                  | 3.4        |
| <b>Total</b>                      | <b>88</b>          | <b>100</b> |
| <b>Geo-political origin VA-13</b> |                    |            |
| North Central                     | 3                  | 3.4        |
| North East                        | 2                  | 2.3        |
| South East                        | 14                 | 15.9       |
| South West                        | 66                 | 75.0       |
| South South                       | 3                  | 3.4        |
| <b>Total</b>                      | <b>88</b>          | <b>100</b> |
| <b>Religion VA-12</b>             |                    |            |
| Christianity                      | 79                 | 89.8       |
| Islam                             | 6                  | 6.8        |
| Traditional                       | 1                  | 1.1        |
| Others                            | 2                  | 2.3        |
| <b>Total</b>                      | <b>88</b>          | <b>100</b> |
| <b>Household size VA-6</b>        |                    |            |
| ≤ 5                               | 62                 | 70.5       |
| 6 – 10                            | 24                 | 27.3       |
| ≥ 11                              | 2                  | 2.3        |
| <b>Total</b>                      | <b>88</b>          | <b>100</b> |

### 8.2.1.3 Socio-Economic Characteristics of Respondents (VA-7,8,9,10)

This comprises the following variables: Level of Education (VA-7), Income group (VA-8), Sources of Income (VA-9), Employment type (VA-10): This study sought to find out the socio-economic characteristics of respondents as shown in table 8.2 .

This table shows that 55.7% of respondents have tertiary education, 43.3% are private-self employed and only 47.7% earn between N76,000-N150,000 monthly (\$501-\$1000usd). While 52.3% have multiple sources of income to fund their type of housing tenure.

**Table 8.2:** Socio-economic characteristics of respondents

| Variable                                      | Frequency (n = 88) | Percent    |
|---|--------------------|------------|
| <b>Education VA-7</b>                         |                    |            |
| Trade school/apprenticeship                   | 1                  | 1.1        |
| Primary                                       | 2                  | 2.3        |
| Secondary                                     | 34                 | 38.6       |
| Tertiary                                      | 49                 | 55.7       |
| Professional membership/Association           | 2                  | 2.3        |
| <b>Total</b>                                  | <b>88</b>          | <b>100</b> |
| <b>Employment type VA-10</b>                  |                    |            |
| Public  | 4                  | 4.5        |
| Private non-self                              | 34                 | 38.6       |
| Private self                                  | 38                 | 43.2       |
| Others  | 12                 | 13.6       |
| <b>Total</b>                                  | <b>88</b>          | <b>100</b> |
| <b>Income (₦) VA-8</b>                        |                    |            |
| ≤ 75,000                                      | 4                  | 4.5        |
| 76 – 150                                      | 42                 | 47.7       |
| 151 – 300                                     | 29                 | 33.0       |
| 300 – 500                                     | 13                 | 14.8       |
| <b>Total</b>                                  | <b>88</b>          | <b>100</b> |
| <b>Sources of income VA-9</b>                 |                    |            |
| Monthly salary                                | 15                 | 17.0       |
| Profit from trading/Contract                  | 25                 | 28.4       |
| Monthly salary + Profit from trading/Contract | 46                 | 52.3       |
| Others  | 2                  | 2.3        |
| <b>Total</b>                                  | <b>88</b>          | <b>100</b> |

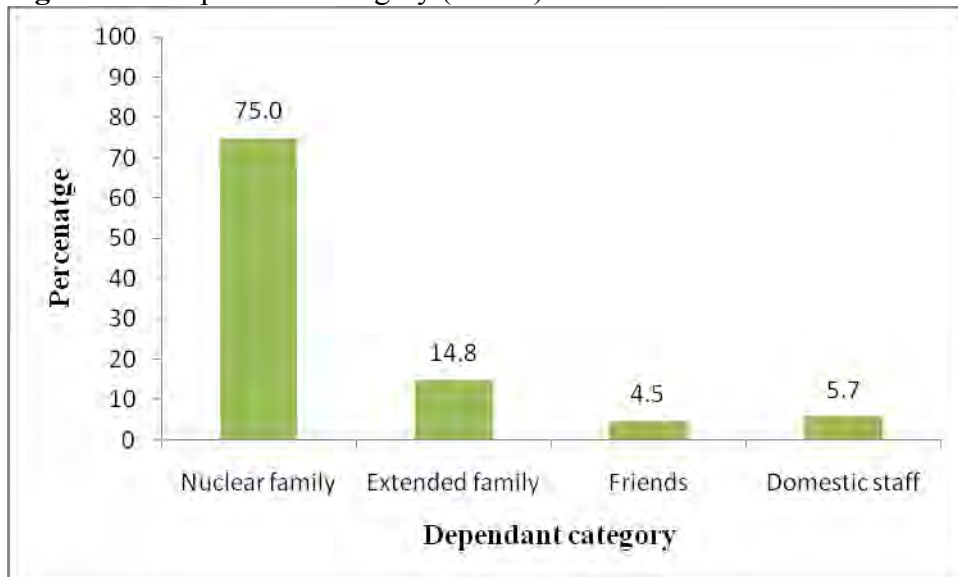
### 8.2.1.4 Social Focus Groups Categories from Within and Among Households (VA-5,11,13)

This includes dependants' category V-5, Lagos residency status/duration of stay V-11 and Geopolitical region of origin VA-13

**1. Dependants' category (VA-5):** This variable is related to the socio-economic characteristics of the households. Since dependants are integral part of their expenditures. Figure 8.2 shows

that 75% of respondents are still within the nuclear family size indicated by variable VA-6 below 5 persons per household.

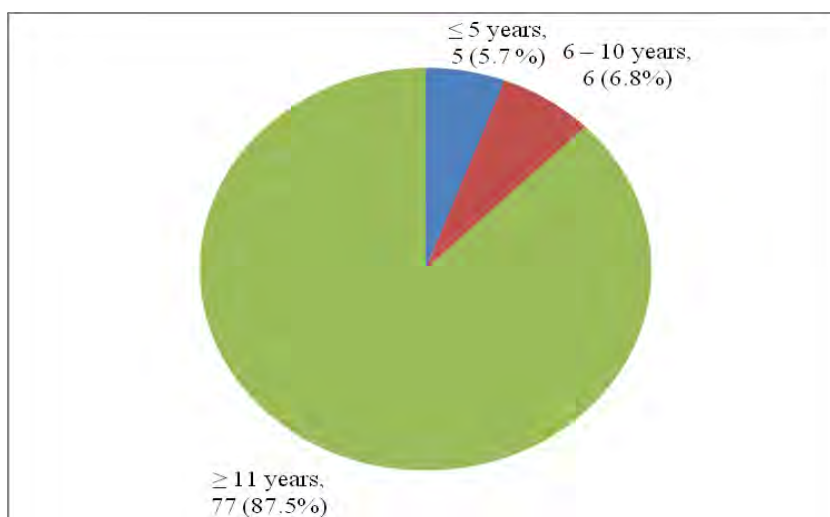
**Figure 8.2:** Dependants category (n = 88)



\*This shows that most middle-income earners have imbibed syncretism and would rather have their nuclear family alone within the confines of their housing. However, the estate typologies and housing typology under investigation forms less than 20% of the entire housing stock in Lagos; about 72% of Lagos housing are rooming housing (FOS, 2004).

**2. Lagos residency level (VA-11):** This study sought to find the duration of stay of respondents in Lagos as in figure 8.3. The pie chart shows that, 87.5% of respondents who have a form of tenure have stayed over 11 years in Lagos; 6.8% have lived in Lagos for between 6-10 years and 5.7% are have lived in Lagos 5 years and below.

**Figure 8.3:** Duration of stay in Lagos (n = 88)



### 3. Geo-Political Origins VA-13:

This study sought to find the relationship between estate typology and the region of the country from which the household migrated to Lagos. Although Lagos is a cosmopolitan and nationally

heterogeneous society, this research posited that housing arrangements are along social focus groups and this implies social agglomeration. It also identified that Lagos is multi-nucleated in its settlement pattern, which took its origins from the tripartite influences as well as its commercial significance. It is evident that most white collar employees tend to stay together among whom are the educated (above secondary education). 75% of the households interviewed are from the South west as indicated in table 8.3 and from table 4.2, 94.3% have above secondary education (i.e. they can read and write).

**Table 8.3** Geo-Political Origins VA-13

| Variable                          | Frequency (n = 88) | Percent |
|-----------------------------------|--------------------|---------|
| <b>Geo-political origin VA-13</b> |                    |         |
| North Central                     | 3                  | 3.4     |
| North East                        | 2                  | 2.3     |
| South East                        | 14                 | 15.9    |
| South West                        | 66                 | 75.0    |
| South South                       | 3                  | 3.4     |

#### 8.2.1.5 Public Sector Involvement (VA-18, VA-19):

**1.Applicability of Public sector involvement to construction/buying of house(VA-18):**This study sought to find how applicable are the process functions to householders tenure type and this is presented in table 8.4. 69.3% of respondents consider public sector involvement very applicable in the provision of land. Planning and authorization were 64.8% and 76.1% respectively as very applicable. 56.85% respondents considered government involvement in transfer of units not applicable at all.

**Table 8.4:** Applicability of Public sector involvement to construction/buying of house

| Criteria                           | Frequency (%) n = 88  |                |           |            |                 |
|------------------------------------|-----------------------|----------------|-----------|------------|-----------------|
|                                    | Not applicable at all | Not applicable | Neutral   | Applicable | Very applicable |
| Initiation of the project          | 0 (0)                 | 0 (0)          | 17 (19.3) | 25 (28.4)  | 46 (52.3)       |
| Provision of land                  | 0 (0)                 | 0 (0)          | 1 (1.1)   | 26 (29.5)  | 61 (69.3)       |
| Financing                          | 65 (73.9)             | 0 (0)          | 1 (1.1)   | 7 (8.0)    | 1 (1.1)         |
| Planning and design                | 0 (0)                 | 14 (15.9)      | 2 (2.3)   | 15 (17.0)  | 57 (64.8)       |
| Authorization                      | 1 (1.1)               | 0 (0)          | 1 (1.1)   | 19 (21.6)  | 67 (76.1)       |
| Building construction              | 0 (0)                 | 0 (0)          | 10 (11.4) | 77 (87.5)  | 1 (1.1)         |
| Infrastructure provision           | 10 (11.4)             | 3 (3.4)        | 20 (22.7) | 54 (61.4)  | 1 (1.1)         |
| Transfer of units                  | 50 (56.8)             | 12 (13.6)      | 5 (5.7)   | 20 (22.7)  | 1 (1.1)         |
| Access to occupancy                | 4 (4.5)               | 60 (68.2)      | 16 (18.2) | 7 (8.0)    | 1 (1.1)         |
| Obtaining certificate of occupancy | 0 (0)                 | 1 (1.1)        | 1 (1.1)   | 23 (22.6)  | 63 (71.6)       |
| Maintenance and management         | 56 (63.6)             | 24 (27.3)      | 0 (0)     | 7 (8.0)    | 1 (1.1)         |

**2.Importance of house construction criteria's(VA-19):**The study sought to find the perceived importance (important,very important,fairly important,not important and neutral) of certain processes identified from literature as criteria's to housing delivery among respondents. Table 8.5 shows the results. 47.7% of respondents perceive government allocation of land as 'very important' to achieving their housing aspiration. 45.5% of respondents perceive the use of architects as 'fairly important'. However, 76.1% of respondents consider a proper title as 'very important' before acquisition of housing and 76.15% would considers obtaining planning approval as 'very important'. 53.45% respondents considers having two architectural drawings one approved the other non-compliant to approval as 'fairly important' before they start construction.

**Table 8.5** Importance of house construction criteria's

| Actions  | Frequency (%) n = 88 |           |           |              |           |
|--|----------------------|-----------|-----------|--------------|-----------|
|  | Not at all           | Fairly I  | Neutral   | Important(I) | Very I    |
| Government allocation for land acquisition             | 1 (1.1)              | 7 (8.0)   | 6 (6.8)   | 32 (36.4)    | 42 (47.7) |
| The use of an architect for design                     | 3 (3.4)              | 40 (45.5) | 12 (13.6) | 18 (20.5)    | 15 (17.0) |
| The use of an architect for supervision                | 1 (1.1)              | 56 (63.3) | 4 (4.5)   | 20 (22.7)    | 7 (8.0)   |
| Architect to conform to one's design aspiration        | 2 (2.3)              | 55 (62.5) | 9 (10.2)  | 16 (18.2)    | 6 (6.8)   |
| Need to build the entire land as one perceives         | 21 (23.9)            | 41 (46.4) | 6 (6.8)   | 15 (17.0)    | 5 (5.7)   |
| Evidence of proper title to property                   | 2 (2.3)              | 6 (6.8)   | 3 (3.4)   | 9 (10.2)     | 67 (76.1) |
| Obtaining approval before construction                 | 1 (1.1)              | 9 (10.2)  | 4 (4.5)   | 10 (11.4)    | 64 (72.7) |
| Complying with all pre-planning approval documentation | 2 (2.3)              | 60 (68.2) | 1 (1.1)   | 8 (9.1)      | 17 (19.3) |
| The location of house/estate                           | 2 (2.3)              | 5 (5.7)   | 3 (3.4)   | 10 (11.4)    | 68 (77.3) |
| Evidence/promise of infrastructure                     | 2 (2.3)              | 2 (2.3)   | 8 (9.1)   | 23 (26.1)    | 53 (60.2) |
| The use of imported materials                          | 1 (1.1)              | 5 (5.7)   | 2 (2.3)   | 54 (61.4)    | 26 (29.5) |
| Use of government inspectors during construction       | 49 (55.7)            | 19 (21.6) | 5 (5.7)   | 12 (3.6)     | 3 (3.4)   |
| Use of registered building contractor/builder          | 12 (13.6)            | 3 (3.4)   | 59 (67.0) | 7 (8.0)      | 7 (8.0)   |
| Use of 2 sets of drawings (approval & construction)    | 6 (6.8)              | 47 (53.4) | 10 (11.4) | 19 (21.6)    | 6 (6.8)   |

Key: I = Important

### 8.2.1.6 Layout/Design Typologies (VA-14,VA-15,VA-23):

The study sought to find the origins of the estate in terms of the four-estate typologies; 63.6% of respondents lived in public estates, and 63.6% live in bungalows in terms of the house typology (the public estate was bungalow type housing, this accounts for the same percentage). Table 8.6 is the data obtained.

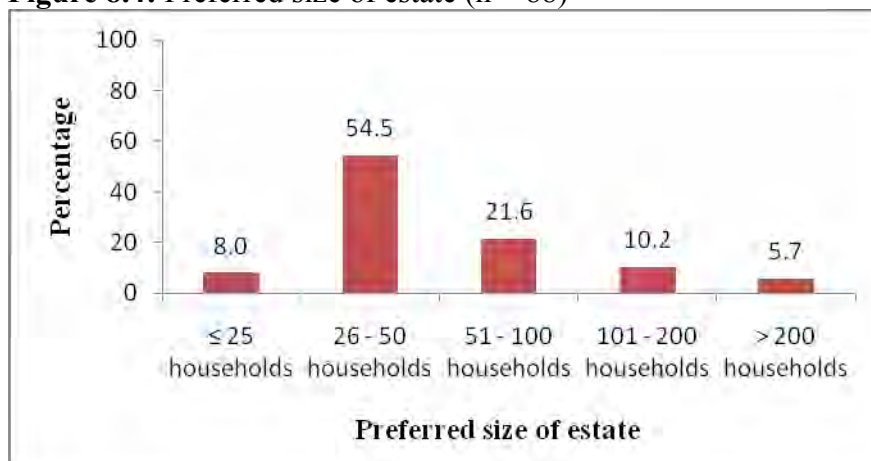
**Table 8.6:** Estate and house typologies

| Variable                     | Frequency (n = 88) | Percent    |
|------------------------------|--------------------|------------|
| <b>Estate typology VA-14</b> |                    |            |
| Public                       | 56                 | 63.6       |
| Private                      | 11                 | 12.5       |
| Public-corporate             | 14                 | 15.9       |
| Public-Private               | 7                  | 8.0        |
| <b>Total</b>                 | <b>88</b>          | <b>100</b> |
| <b>House typology VA-15</b>  |                    |            |
| Bungalow                     | 56                 | 63.6       |
| Flat in block                | 7                  | 8.0        |
| Semi-detached house          | 19                 | 21.6       |
| Detached house               | 6                  | 6.8        |
| <b>Total</b>                 | <b>88</b>          | <b>100</b> |

**Preferred size of estate (VA-23):** This study sought to find the size of housing estate households would prefer to dwell. Figure 8.4 is a representation this response graphically.

54.5% indicated between 26-50 housing units per estate was a preferred size. Only 5.7% indicated their preference from housing estates of over 200 housing units. While, 8% indicated housing estates of 25 housing units or less and 21.6% indicated housing estates of 51-100 housing units.

**Figure 8.4:** Preferred size of estate (n = 88)



**8.2.1.7 Access to Occupancy; access/cost of house (VA-16/VA-17):** The study sought to find the mode of payment for housing matched against the cost of the housing; results presented in table 8.7. 84.1% of respondents paid cash for their type of tenure while 1.1% had access to mortgage to cater for their type of tenure. The lower priced housing of N5million and below accounted for 60.2% ownership tenure paying cash predominantly. While 12.5% respondents buying into housing priced at N15m and above used multiple sources of financing as well as undisclosed sources.

**Table 8.7:** Access to Occupancy; access/cost of house

| Variable                             | Frequency (n = 88) | Percent    |
|--------------------------------------|--------------------|------------|
| <b>Access to house VA-16</b>         |                    |            |
| Cash payment/s                       | 74                 | 84.1       |
| Loan mortgage banks                  | 1                  | 1.1        |
| Cash payment/s + Loan mortgage banks | 1                  | 1.1        |
| Others                               | 12                 | 13.6       |
| <b>Total</b>                         | <b>88</b>          | <b>100</b> |
| <b>Cost of house (₦) VA-17</b>       |                    |            |
| ≤ 5 million                          | 53                 | 60.2       |
| 5.1 – 10 million                     | 20                 | 22.7       |
| 10.1 – 15 million                    | 4                  | 4.5        |
| ≥ 15.1 million                       | 11                 | 12.5       |
| <b>Total</b>                         | <b>88</b>          | <b>100</b> |

#### 8.2.1.8 Lifestyle Preferences-Design (VA-21/22):

The study sought to find out how certain lifestyle attributes/criteria are important to households from a design/spatial standpoint. Table 4.8, is a presentation of the results. 51.1% of respondents consider size of land as ‘fairly important’ to them in Lagos. 40.9% considers size of bedroom as ‘important’ while a further specific indicator of master bedroom shows that 35.2% of respondents perceive it as very important. Only 43.2% suggest that the size of house was ‘important’. While, 34.1% of respondents considered kitchen size ‘importance’ and 47.7% considered wardrobe size ‘very important’. Moreso, 38.6% of respondents considered ‘important’ the size of housing estate.

**Table 8.8** Household lifestyle preferences

| Actions                | Frequency (%) n = 88 |           |           |           |           |
|------------------------|----------------------|-----------|-----------|-----------|-----------|
|                        | Not at all           | Fairly I  | Neutral   | Important | Very I    |
| Size of land           | 2 (2.3)              | 45 (51.1) | 7 (8.0)   | 21 (23.9) | 13 (14.8) |
| Size of bed room       | 1 (1.1)              | 33 (37.5) | 10 (11.4) | 36 (40.9) | 8 (9.1)   |
| Size of master bedroom | 4 (4.5)              | 19 (21.6) | 8 (9.1)   | 26 (29.5) | 31 (35.2) |
| Size of living room    | 2 (2.3)              | 35 (39.8) | 4 (4.5)   | 28 (31.8) | 11 (12.5) |
| Size of house          | 4 (4.5)              | 22 (25.0) | 8 (9.1)   | 38 (43.2) | 16 (18.2) |
| Size of toilets        | 5 (5.7)              | 36 (40.9) | 21 (23.9) | 19 (21.6) | 7 (8.0)   |
| Size of kitchen        | 9 (10.2)             | 12 (13.6) | 9 (10.2)  | 30 (34.1) | 28 (31.8) |
| Size of storage        | 3 (3.4)              | 26 (29.5) | 14 (15.9) | 16 (18.2) | 29 (33.0) |
| Size of stairs         | 2 (2.3)              | 43 (48.9) | 15 (17.0) | 12 (13.6) | 16 (18.2) |
| Size of estate         | 3 (3.4)              | 34 (38.6) | 7 (8.0)   | 25 (28.4) | 19 (21.6) |
| Size of wardrobes      | 2 (2.3)              | 22 (25.0) | 11 (12.5) | 11 (12.5) | 42 (47.7) |

Key: I = Important

### Household lifestyle preference-a perception of attributes of housing conditions (VA-22):

This study sought to find out the importance of certain lifestyle preferences associated with attributes of housing conditions. Table 8.9, is a presentation of the study's findings (Key: I = Important).

**Table 8.9** Household lifestyle preference-a perception of attributes of housing conditions.

| Attribute   | Frequency (%) n = 88 |           |           |           |           |
|---|----------------------|-----------|-----------|-----------|-----------|
|   | Not at all           | Fairly I  | Neutral   | Important | Very I    |
| Location of estate within 30 minutes of central Lagos         | 1 (1.1)              | 16 (18.2) | 10 (11.4) | 16 (18.2) | 45 (51.1) |
| Government planned estate                                     | 4 (4.5)              | 9 (10.2)  | 18 (20.5) | 18 (20.5) | 39 (44.3) |
| Private planned estate  | 6 (6.8)              | 19 (21.6) | 25 (28.4) | 26 (29.5) | 12 (13.6) |
| Government and private planned estate                         | 0 (0)                | 35 (39.8) | 27 (30.7) | 9 (10.2)  | 17 (19.3) |
| Arbitrary purchase of land from families in unplanned areas   | 69 (78.4)            | 0 (0)     | 18 (20.5) | 1 (1.1)   | 0 (0)     |
| Availability of government provided electricity and water     | 1 (1.1)              | 16 (18.2) | 10 (11.4) | 27 (30.7) | 34 (38.6) |
| Availability of privately provided generator and bore hole    | 10 (11.4)            | 44 (50.0) | 12 (13.6) | 12 (13.6) | 10 (11.4) |
| Availability of recreation area in the estate                 | 1 (1.1)              | 48 (54.5) | 7 (8.0)   | 19 (21.6) | 13 (14.8) |
| Availability of shopping centre in the estate                 | 3 (3.4)              | 39 (44.3) | 5 (5.7)   | 21 (23.9) | 20 (22.7) |
| Availability of shops for rent in the estate                  | 12 (13.6)            | 60 (68.2) | 6 (6.8)   | 2 (2.3)   | 8 (9.1)   |
| Adaptability of house to create shops and home based office   | 18 (20.5)            | 45 (51.1) | 14 (15.9) | 5 (5.7)   | 6 (6.8)   |
| Use of tree/flower along drive way                            | 6 (6.8)              | 45 (51.1) | 13 (14.8) | 12 (13.6) | 12 (13.6) |
| Use of street lights  | 0 (0)                | 10 (9.2)  | 6 (6.8)   | 26 (29.5) | 47 (53.4) |
| Provision of motorable roads/street lights/drainage           | 0 (0)                | 5 (5.7)   | 18 (20.5) | 15 (17.0) | 50 (56.8) |
| Compulsory 30% green area in premises                         | 2 (2.3)              | 60 (68.2) | 12 (13.6) | 9 (10.2)  | 5 (5.7)   |
| Provision of functional side walks                            | 2 (2.3)              | 44 (50.0) | 24 (27.3) | 10 (11.4) | 8 (9.1)   |
| Provision of boys quarters                                    | 2 (2.3)              | 7 (8.0)   | 9 (10.2)  | 43 (48.9) | 27 (30.7) |
| Provision of security fence and gate house to premises        | 6 (6.8)              | 39 (44.3) | 8 (9.1)   | 26 (29.5) | 9 (10.2)  |
| Provision of waste disposal bins/collection in front of house | 4 (4.5)              | 62 (70.5) | 14 (15.9) | 4 (4.5)   | 4 (4.5)   |
| Provision of additional space for extension of house at will  | 3 (3.4)              | 31 (35.2) | 9 (10.2)  | 10 (11.4) | 35 (39.8) |
| Provision of security fence around the estate                 | 0 (0)                | 6 (6.8)   | 3 (3.4)   | 37 (42.0) | 42 (47.7) |
| Provision of common water, electricity, etc for the estate    | 1 (1.1)              | 13 (14.8) | 5 (5.7)   | 15 (17.0) | 54 (61.4) |



**8.2.1.9 Perception of housing Environment/Quality of housing-material attributes/criteria's (VA-24):** This study sought to find the importance of quality of construction material to households. From table 8.10, 44.3% of respondents consider as 'important' the use of imported roofing sheets and 29.55% 'most important'. Roofing products such as zinc (corrugated iron) and asbestos, which were popular in the colonial period and early post colonial, were 'not important' at 61.4% and 59.1% of respondents respectively. Use of Jacuzzi was 'fairly important' at 52.3% and use of local bathtub was 53.45% and 'fairly important'. Only 30.7% considered the use of aluminum windows as 'fairly important', while 38.6% of respondents felt it was 'most important' and 26.15% felt it was 'important'.

**Table 8.10** Households perception of housing environment/quality of housing-material attributes/criteria's.

| Criteria   | Frequency (%) n = 88 |           |           |           |           |
|--|----------------------|-----------|-----------|-----------|-----------|
|  | Not I                | Fairly I  | DNA       | Important | Most I    |
| Use of imported roofing sheets                     | 0 (0)                | 5 (5.7)   | 18 (20.5) | 39 (44.3) | 26 (29.5) |
| Use of local asbestos roofing sheets               | 52 (59.1)            | 8 (9.1)   | 28 (31.8) | 0 (0)     | 0 (0)     |
| Use of local zinc roofing sheets                   | 54 (61.4)            | 0 (0)     | 34 (38.6) | 0 (0)     | 0 (0)     |
| Use of imported plaster boards ceiling             | 6 (6.8)              | 23 (26.1) | 10 (11.4) | 20 (22.7) | 29 (33.3) |
| Use of imported tiles (vitrified, granite, marble) | 0 (0)                | 28 (31.8) | 4 (4.5)   | 15 (17.0) | 41 (46.6) |
| Use of imported bath/Jacuzzi/wc/whb                | 1 (1.1)              | 46 (52.3) | 4 (3.4)   | 14 (15.9) | 23 (26.1) |
| Use of local bath/wc/whb                           | 18 (20.5)            | 47 (53.4) | 8 (9.1)   | 14 (15.9) | 1 (1.1)   |
| Use of imported doors                              | 0 (0)                | 21 (23.9) | 5 (5.7)   | 34 (38.6) | 28 (31.8) |
| Use of aluminum windows                            | 0 (0)                | 27 (30.7) | 4 (4.5)   | 23 (26.1) | 34 (38.6) |
| Use of plastic windows                             | 29 (33.0)            | 51 (58.0) | 5 (5.7)   | 2 (2.3)   | 1 (1.1)   |
| Use of louver windows                              | 79 (89.8)            | 0 (0)     | 8 (9.1)   | 0 (0)     | 1 (1.1)   |

Key: I = Important, DNA = Does Not Apply

**\* Households' perception of housing environment/quality of housing-house design quality and environment (VA-25):** This study sought to find the applicability of certain house design quality and environment quality to household preferences as adequate design requirements. Table 8.11, is a presentation of the respondents results. 69.3% considered the existence of entrance porch as a design space 'very applicable' in their preference. 13.6% prefer a view of

the street as ‘applicable’.61.45% consider space for boys quarters or its existence as ‘applicable’.78.4% of respondents consider as ‘very applicable’ a house with all bedrooms en-suite with toilet facilities.27.3% considered as ‘applicable’ the use of high perimeter fences.

**Table 8.11:** House design quality and environment

| Criteria   | Frequency (%) n = 88 |           |           |           |           |
|--|----------------------|-----------|-----------|-----------|-----------|
|  | NAA                  | Not A     | Neutra l  | A         | Very A    |
| House with an entrance porch /verandah is most important                         | 0 (0)                | 6(6.8)    | 8 (9.1)   | 13 (14.8) | 61 (69.3) |
| A view of the street from entrance porch   | 9 (10.2)             | 56 (63.6) | 3 (3.4)   | 12 (13.6) | 8 (9.1)   |
| Tall fences feels most secured   | 25 (28.4)            | 29 (33.0) | 9 (10.2)  | 24 (27.3) | 1 (1.1)   |
| Space for boys quarter make my perception of adequacy                            | 2 (2.3)              | 2 (2.3)   | 5 (5.7)   | 54 (61.4) | 25 (28.4) |
| All bedroom en-suite with toilets is acceptable practice                         | 0 (0)                | 6 (6.8)   | 3 (3.4)   | 10 (11.4) | 69 (78.4) |
| The house must have the correct climatic orientation                             | 4 (4.5)              | 55 (62.5) | 14 (15.9) | 4 (4.5)   | 11 (12.5) |
| Particular about energy savings and use of alternatives                          | 17 (19.3)            | 47 (53.4) | 16 (18.2) | 5 (5.7)   | 3 (3.4)   |
| Particular about car park spaces within the premises                             | 2 (2.3)              | 21 (23.9) | 2 (2.3)   | 7 (8.0)   | 56 (63.6) |
| Particular about been able to enter without been seen (multiple access to house) | 0 (0)                | 0 (0)     | 2 (2.3)   | 55 (62.5) | 31 (35.2) |
| Spaces for preparing local food  | 4 (4.5)              | 40 (45.5) | 7 (8.0)   | 32 (36.4) | 5 (5.7)   |

Key: A = Applicable, NAA = Not at all

#### 8.2.1.10 Social Arrangements; coalition among residents within housing estate (VA-26):

The study sought to find the perceived applicable levels of coalition within housing estates from certain statements of association and organization. Table 8.12 is a representation of responses from households.

The existence of landlord/residents association was ‘very applicable’ to 40.9% of respondents. While 56.8% respondents perceive existence of such association as ‘not applicable’, irrespective of the fact that they lived in an estate that practices residents’ association meetings. Rotational leadership within the coalition of existing association was ‘very applicable’ to 84.1% of respondents, yet attendance to monthly meetings was only ‘very applicable’ to 3.4% of respondents.

**Table 8.12:** Social Arrangements: Coalition among resident within housing estate

| Criteria  | Frequency (%) n = 88 |           |           |           |           |
|---|----------------------|-----------|-----------|-----------|-----------|
|   | NAA                  | Not A     | Neutral   | A         | Very A    |
| There is a landlord/resident association in the estate    | 0 (0)                | 50 (56.8) | 1 (1.1)   | 1 (1.1)   | 36 (40.9) |
| The meeting is held once a month to discuss estate issues | 0 (0)                | 55 (62.5) | 1 (1.1)   | 0 (0)     | 32 (36.4) |
| Everyone complies with the outcome of these discussions   | 0 (0)                | 28 (31.8) | 2 (2.3)   | 40 (45.5) | 18 (20.5) |
| These outcomes has improved state of the estate           | 0 (0)                | 24 (27.3) | 6 (6.8)   | 33 (37.5) | 25 (28.4) |
| There is a monthly contribution by all residents          | 0 (0)                | 17 (19.3) | 2 (2.3)   | 38 (43.2) | 31 (35.2) |
| This amount is paid by all                                | 0 (0)                | 0 (0)     | 1 (1.1)   | 57 (64.8) | 30 (34.1) |
| The amount is considered too much                         | 11 (12.5)            | 24 (27.3) | 13 (13.6) | 27 (30.7) | 13 (14.8) |
| Association is able to make representation to government  | 70 (79.5)            | 9 (10.2)  | 6 (6.8)   | 0 (0)     | 3 (3.4)   |
| The estate by-laws are recognized by the state            | 87 (98.9)            | 0 (0)     | 1 (1.1)   | 0 (0)     | 0 (0)     |
| The leadership recognizes the need to rotate the posts    | 0 (0)                | 0 (0)     | 3 (3.4)   | 11 (12.5) | 74 (84.1) |
| Attendance at the monthly meeting is always over 50%      | 1 (1.1)              | 63 (71.6) | 8 (9.1)   | 13 (14.8) | 3 (3.4)   |

Key: A = Applicable, NAA = **Not at all**

**\*Perception of the building process in Lagos (VA-20):**

The study sought to find how cumbersome certain aspects of the building process are in Lagos from respondents as shown in table 8.13. Land acquisition, 70.5% think it is very cumbersome, 46.6% think hiring an architect is not cumbersome, 67% perceives planning approval process as very cumbersome, 67% perceives finding building materials and their alternatives is fairly cumbersome and 51.1% responds that managing cost overrun is very cumbersome.

\*(Most respondents verbally said even though they traditional want to build their houses they would rather buy first from government or reputable developers.)

The nature of cumbersomeness in the building process underscores respondents' willingness to comply with institutional arrangements. Whatever is perceived as cumbersome, automatically jumpstarts a social arrangement to solve the uphill task so perceived. The literature documents occurrences of these built environment ills, which were identified as contraventions to regulatory framework and tacit social arrangements to meet the yearnings of the majority's housing aspiration. This is a major setback for planned objectives in housing.

**Table 8.13** Perception of cumbersomeness of the building process in Lagos

| Actions                                | Frequency (%) n = 88 |           |           |           |           |
|--|----------------------|-----------|-----------|-----------|-----------|
|  | Very C               | Fairly C  | C         | Not C     | I         |
| Land acquisition                       | 62 (70.5)            | 9 (10.2)  | 11 (12.5) | 3 (3.4)   | 3 (3.4)   |
| Obtaining title                        | 35 (39.8)            | 42 (47.7) | 4 (4.5)   | 4 (45.5)  | 3 (3.4)   |
| Hiring an architect                    | 3 (3.4)              | 21 (23.9) | 18 (20.5) | 41 (46.6) | 5 (5.7)   |
| Obtaining designs                      | 0 (0)                | 10 (11.4) | 16 (18.2) | 59 (67.0) | 3 (3.4)   |
| Hiring services of other professionals | 10 (11.4)            | 6 (6.8)   | 16 (18.2) | 31 (35.2) | 25 (28.4) |
| Paying fees                            | 46 (52.3)            | 13 (14.8) | 4 (4.5)   | 20 (22.7) | 5 (5.7)   |
| Planning process                       | 59 (67.0)            | 16 (18.2) | 7 (8.0)   | 3 (3.4)   | 3 (3.4)   |
| Use of approval agent                  | 63 (71.6)            | 11 (12.5) | 7 (8.0)   | 2 (2.3)   | 5 (5.7)   |
| Obtaining approval by oneself          | 62 (70.5)            | 14 (15.9) | 8 (9.1)   | 3 (3.4)   | 1 (1.1)   |
| Paying government charges              | 11 (12.5)            | 63 (71.6) | 0 (0)     | 12 (13.6) | 2 (2.3)   |
| Finding a builder                      | 1 (1.1)              | 3 (3.4)   | 27 (30.7) | 50 (56.8) | 7 (8.0)   |
| Managing the building activity         | 25 (28.4)            | 48 (54.5) | 10 (11.4) | 3 (3.4)   | 2 (2.3)   |
| Making purchase/materials              | 18 (20.5)            | 50 (56.8) | 6 (6.8)   | 3 (3.4)   | 11 (12.5) |
| Making payment, good/services          | 5 (5.7)              | 23 (26.1) | 7 (8.0)   | 42 (47.7) | 11 (12.5) |
| Finding materials/alternative          | 8 (9.1)              | 59 (67.0) | 4 (4.5)   | 3 (3.4)   | 14 (15.9) |
| Managing cost overrun                  | 45 (51.1)            | 19 (21.6) | 4 (4.5)   | 3 (3.4)   | 5 (5.7)   |

Key: C = Cumbersome, I = Indifferent

Managing the building activity is perceived as cumbersome by 54.5% of respondents. While making payments for goods and services in the course of building process is not cumbersome to 47.7% of respondents. However, the management of cost overrun is very cumbersome to 51.1% of respondents.

### 8.2.2 The Housing Development actors/partners (Questionnaire-B/VB)

This study sought to investigate the general development profile of housing developers from among the REDAN members, independent developers, and government agencies that engage in housing development and to see their organizational arrangements, which influences HDS. Table 8.14 shows the criteria used to achieve this investigation.

**8.2.2.1 Socio-Demographic Characteristics of Respondents(VB-2,3,4,5):** The estate typology VB-2, age of the estate VB3, age of estate development firm VB4 and housing development actor/partners tenure for the estate.

**Table 8.14** Socio-Demographic Characteristics- Location, typology and age of estate

| <b>Variable</b>                           | <b>Frequency (n = 20)</b> | <b>Percent</b> |
|---|---------------------------|----------------|
| <b>Location of estate VB-1</b>            |                           |                |
| Group I                                   | 6                         | 30.0           |
| Group II                                  | 4                         | 20.0           |
| Group III                                 | 5                         | 25.0           |
| Group IV                                  | 5                         | 25.0           |
| <b>Total</b>                              | <b>20</b>                 | <b>100</b>     |
| <b>Estate typology VB-2</b>               |                           |                |
| Public                                    | 1                         | 5.0            |
| Private                                   | 6                         | 30.0           |
| Public-Corporate                          | 6                         | 30.0           |
| Public-Private                            | 7                         | 35.0           |
| <b>Total</b>                              | <b>20</b>                 | <b>100</b>     |
| <b>Age of estate (year) VB-3</b>          |                           |                |
| ≤ 5                                       | 2                         | 10.0           |
| 6 – 10                                    | 2                         | 10.0           |
| 11 – 15                                   | 10                        | 50.0           |
| ≥ 16                                      | 6                         | 30.0           |
| <b>Total</b>                              | <b>20</b>                 | <b>100</b>     |
| <b>Age of development firm(year) VB-4</b> |                           |                |
| ≤ 5                                       | 3                         | 15.0           |
| 6 – 10                                    | 5                         | 25.0           |
| 11 – 15                                   | 6                         | 30.0           |
| ≥ 16                                      | 6                         | 30.0           |
| <b>Total</b>                              | <b>20</b>                 | <b>100</b>     |
| <b>Developer's tenure for estate VB-5</b> |                           |                |
| Lease hold (1 – 99 years)                 | 8                         | 40.0           |
| Free hold                                 | 9                         | 45.0           |
| Sublease                                  | 3                         | 15.0           |
| <b>Total</b>                              | <b>20</b>                 | <b>100</b>     |

**8.2.2.2 Socio-Economic Characteristics of Respondents (VB-8,10,13,14):**The variables in table 8.15 sought to investigate the location of estate by housing development actors/partners in relation to ROI; also, to ascertain their sources of funding, construction cost, and the implication to the technology used to achieve the projects. Among housing development actors/partners, 60% responded positively to been influenced by between 11-30%ROI for their choice of estate location. While those actors/partners who sort 51%ROI and above where a dismal 5% of respondents. When asked their sources of funding for housing development 75% of housing development actors/partners attested to the use of two or more sources of funding. Among respondents, 50% were of the opinion that construction cost was ‘very high’ and 40% of these respondents utilized intermediate technology to achieve housing production.

**Table 8.15** Socio-Economic Characteristics of Respondents-ROI, Sources of funding, construction cost

| Variable   | Frequency(n = 20) | Percent    |
|--|-------------------|------------|
| <b>Choice of estate location influenced ROI. VB-8</b>      |                   |            |
| Yes (10% and below ROI)                                    | 1                 | 5.0        |
| Yes (11 – 30% ROI)   | 12                | 60.0       |
| Yes (31 – 50% ROI)   | 4                 | 20.0       |
| Yes (51% ROI and above)                                    | 2                 | 10.0       |
| No   | 1                 | 5.0        |
| <b>Total</b>   | <b>20</b>         | <b>100</b> |
| <b>Sources of funding VB-10</b>                            |                   |            |
| NHF contribution-FMBN funding system                       | 3                 | 15.0       |
| Commercial loan system                                     | 1                 | 5.0        |
| Privately sourced local funds (non-financial institutions) | 1                 | 5.0        |
| Combination of any two or more sources                     | 15                | 75.0       |
| <b>Total</b>   | <b>20</b>         | <b>100</b> |
| <b>Developers' opinion of construction cost VB-13</b>      |                   |            |
| Fairly high  | 8                 | 40.0       |
| Very high  | 10                | 50.0       |
| Too high   | 2                 | 10.0       |
| <b>Total</b>   | <b>20</b>         | <b>100</b> |
| <b>Level of technology utilized VB-14</b>                  |                   |            |
| Manual   | 6                 | 30.0       |
| Intermediate   | 8                 | 40.0       |
| High   | 2                 | 10.0       |
| Combination any 2 or more                                  | 4                 | 20.0       |
| <b>Total</b>   | <b>20</b>         | <b>100</b> |

**8.2.2.3 Profit Motive of Actors/Partners( VB-6,7,11):**These data sought to investigate the profit motive of actors/partner surveyed and the results are presented in table 8.16. It shows that, 25% of respondents considered profit motive ‘very important’ to their embarking on estate development while 30% considered profit motive ‘fairly important’ and another 30% ‘important’ on a five scale level of importance of profit motive.

**Table 8.16** Profit Motive of Actors/Partners

| Variable  | Frequency (%) n = 20 |            |
|---|----------------------|------------|
|   | Yes                  | No         |
| <b>Provision of infrastructure in the estate VB-6</b>           |                      |            |
| Access road provided by developer                               | 18 (90.0)            | 2 (10.0)   |
| Estate road network provided by developer                       | 20 (100)             | 0 (0)      |
| Storm water drainage provided by developer                      | 18 (90.0)            | 2 (10.0)   |
| Electricity (PHCN) supply provided by developer                 | 19 (95.0)            | 1 (5.0)    |
| Sewage collection/disposal by developer                         | 19 (95.0)            | 1 (5.0)    |
| Pipe borne water supply provided by developer                   | 20 (100)             | 0 (0)      |
| Solid waste collection/disposal provided by developer           | 18 (90.0)            | 2 (10.0)   |
| <b>Developers Access to land VB-7</b>                           |                      |            |
| Subsidized land by government allocation below 50% market value | 11                   | 55.0       |
| Subsidized land by government allocation above 50% market value | 1                    | 5.0        |
| Unsubsidized land at market value                               | 2                    | 10.0       |
| Free land by government allocation                              | 6                    | 30.0       |
| <b>Total</b>  | <b>20</b>            | <b>100</b> |
| <b>Developers profit motive VB-11</b>                           |                      |            |
| Not important at all  | 2                    | 10.0       |
| Fairly important  | 6                    | 30.0       |
| Neutral   | 1                    | 5.0        |
| Important   | 6                    | 30.0       |
| Very important  | 5                    | 25.0       |
| <b>Total</b>  | <b>20</b>            | <b>100</b> |

**8.2.2.4 Factors Influencing Estate Development Commitment (VA-12,15):** These variables sought to find out what factors among certain identified attributes drawn from institutional requirements influences the commitment of actors/partners. Tables 8.17 are the findings. 90% of actors/partners surveyed strictly used building regulation guidelines to achieve their estate development. Levels of compliance by respondents to the statutory institutional criteria were high for six attributes of commitment requested of them for estate development. While in the fulfillment of government policy as a criterion to actors/partners commitment to estate development, 55% held as ‘applicable’. Therefore, respondents are more likely to participate in estate development where government fulfills their part of policy enablement or provisions.

**Table 8.17** Housing Development Actors/Partners Commitment to estate development

| Variable   | Frequency (%) n = 20 |          |
|--|----------------------|----------|
|  | Yes                  | No       |
| <b>commitment to estate development VB-12</b>  |                      |          |
| Strict use of registered professionals always payment of full fees                   | 16 (80.0)            | 4 (20.0) |
| Strict use of certified contracting firms  | 16 (80.0)            | 4 (20.0) |
| Strict use of building regulation guidelines   | 18 (90.0)            | 2 (10.0) |
| Strict use of value added technology   | 15 (75.0)            | 5 (25.0) |
| Continuous use of research to improve outcome  | 15 (75.0)            | 5 (25.0) |
| Strict use of SON certified building   | 15 (75.0)            | 5 (25.0) |
| <b>Fulfillment of government policy applicable to criteria for development VB-15</b> |                      |          |
| Not applicable   | 1                    | 5.0      |
| Applicable   | 11                   | 55.0     |
| Strongly applicable  | 2                    | 10.0     |
| Neutral  | 6                    | 30.0     |
| Total  | 20                   | 100      |

### 8.2.3 The Housing Development Experts (Questionnaire-C/VC)

This study sought to investigate the general trend among housing development experts (HDE) thought to influence the housing arrangements in Lagos (directly/indirectly): Directly by their involvement, and indirectly by their professional advice to institutions, or via a direct copying of works or trends by other actors/partners.

**8.2.3.1 Socio-Demographic Characteristics of Respondents (VC-1,2,3,4):** This study sought to investigate the general profile of housing development experts and their direct/indirect influences on the overall HDS institutionally and organizationally in Lagos. Figure 8.5 and table 8.18 below show the results; 54.1% (33.3+ 20.8%) of interviewed housing development experts are in the public/corporate public sectors whose involvement in the HDS of Lagos is traceable by their roles as defined in this study. The influence of private sector housing development experts on the housing condition of Lagos is 16.7%. This indicates that the

outlook of the housing condition in Lagos is a true state of activities by the public sector experts and not necessarily, the private sector experts. A failure in quality of housing and housing environment is a failure by public sector experts. It is evident that 33.3% of public sector experts influence HDS of Lagos by role.

**Figure 8.5:** VC-1;The sector of housing where respondents utilize their professional role/influence to shape HDS



(n = 24)

**Table 8.18** Socio- Demographic Characteristics of Respondents-HDE

| Variable   | Frequency (n = 24) | Percent    |
|--|--------------------|------------|
| <b>Academic qualification of respondent VC-4</b>     |                    |            |
| Diploma/Apprenticeship                               | 4                  | 16.7       |
| Bachelor degree                                      | 13                 | 54.2       |
| Masters degree                                       | 4                  | 16.7       |
| Doctoral degree                                      | 1                  | 4.2        |
| Professor  | 2                  | 8.3        |
| <b>Total</b>   | <b>24</b>          | <b>100</b> |
| <b>Professional category of architect VC-2</b>       |                    |            |
| AEC professional                                     | 6                  | 25.0       |
| Non-AEC professional                                 | 2                  | 8.3        |
| REDAN developer                                      | 5                  | 20.8       |
| Non-REDAN developer                                  | 11                 | 45.8       |
| <b>Total</b>   | <b>24</b>          | <b>100</b> |
| <b>Length of professional experience (year) VC-3</b> |                    |            |
| ≤ 10   | 1                  | 4.2        |
| 11 – 20  | 4                  | 16.7       |
| 21 – 30  | 2                  | 8.3        |
| ≥ 31   | 17                 | 70.8       |
| <b>Total</b>   | <b>24</b>          | <b>100</b> |

In addition, from table 8.18, the qualification of expert's respondents shows that 54.2% have their first degree and only 25% are AEC registered professionals.

**8.2.3.2 Socio-Economic Characteristic of Respondents (VC-14):** These variables reflect criterias/attributes used by HDE towards influencing HDS of Lagos directly or indirectly. Table 8.19 shows the criteria and attributes used to measure housing development expert's



preferences and attitudes in the performance of professional role as a stakeholder. It shows that, 66.7% of Housing development experts consider evidence of property title as very important; while 70.8% considered compliance to all pre-planning approval documents as ‘fairly important’. This accounts for HDE weakness in compliance to planning regulation.

**Table 8.19** Socio-economic Characteristics of Housing Development Experts

| Criteria/attributes of HDE considerations in relation to HDS of Lagos | Frequency (%) n = 24 |           |          |           |           |
|---|----------------------|-----------|----------|-----------|-----------|
|   | Not at all           | Fairly I  | Neutral  | I         | Very I    |
| The source of funding   | 2 (8.3)              | 10 (41.7) | 2 (8.3)  | 2 (8.3)   | 8 (33.3)  |
| The interest rate offered   | 2 (8.3)              | 5 (20.8)  | 3 (12.5) | 4 (16.7)  | 10 (41.7) |
| The size of the house/land  | 2 (8.3)              | 7 (29.2)  | 3 (12.5) | 5 (20.8)  | 7 (29.2)  |
| The building style  | 0 (0)                | 10 (41.7) | 8 (33.3) | 3 (12.5)  | 3 (12.5)  |
| The estate type   | 1 (4.2)              | 7 (29.2)  | 3 (12.5) | 6 (25.0)  | 7 (29.2)  |
| Evidence of proper title of property                                  | 0 (0)                | 3 (12.5)  | 0 (0)    | 5 (20.8)  | 16 (66.7) |
| Buying from known developer   | 0 (0)                | 8 (33.3)  | 1 (4.2)  | 11 (45.8) | 4 (16.7)  |
| The quality of the structure  | 0 (0)                | 0 (0)     | 0 (0)    | 17 (70.8) | 7 (29.2)  |
| The location of the house/estate                                      | 0 (0)                | 13 (54.2) | 4 (16.7) | 2 (8.3)   | 5 (20.8)  |
| Evidence/promise of infrastructure                                    | 0 (0)                | 9 (37.5)  | 1 (4.2)  | 10 (41.7) | 4 (16.7)  |
| The quality of finishing  | 0 (0)                | 6 (25.0)  | 1 (4.2)  | 14 (58.3) | 3 (12.5)  |
| The use of mortgage originator  | 10 (41.7)            | 7 (29.2)  | 1 (4.2)  | 6 (25.0)  | 0 (0)     |
| Repayment term of less than 10 years                                  | 0 (0)                | 2 (8.3)   | 1 (4.2)  | 12 (50.0) | 9 (37.5)  |
| Buying land/house that cannot be registered in one's name             | 0 (0)                | 17 (70.8) | 1 (4.2)  | 5 (20.8)  | 1 (4.2)   |
| Ownership of house in neighbourhood of one's choice                   | 0 (0)                | 19 (79.2) | 3 (12.5) | 2 (8.3)   | 0 (0)     |
| Use of government allocation/layout for land acquisition              | 0 (0)                | 10 (41.7) | 1 (4.2)  | 2 (8.3)   | 11 (45.8) |
| The use of an architect for design                                    | 0 (0)                | 15 (62.5) | 3 (12.5) | 3 (12.5)  | 3 (12.5)  |
| The use of an architect for supervision                               | 2 (8.3)              | 17 (70.8) | 1 (4.2)  | 3 (12.5)  | 1 (4.2)   |
| The architect to conform to one's design aspirations                  | 4 (16.7)             | 9 (37.5)  | 2 (8.3)  | 4 (16.7)  | 5 (20.8)  |
| The need to build up the entire land as one perceives                 | 6 (25.0)             | 14 (58.3) | 1 (4.2)  | 1 (4.2)   | 2 (8.3)   |
| Obtaining approval before construction                                | 0 (0)                | 13 (54.2) | 1 (4.2)  | 7 (29.2)  | 3 (12.5)  |
| Complying with all pre-planning approval documents                    | 1 (4.2)              | 17 (70.8) | 2 (8.3)  | 3 (12.5)  | 1 (4.2)   |
| The use of government inspectors during construction                  | 18 (75.0)            | 0 (0)     | 5 (20.8) | 1 (4.2)   | 0 (0)     |
| The use of registered building contractor/builder                     | 13 (54.2)            | 5 (20.8)  | 5 (20.8) | 1 (4.2)   | 0 (0)     |

Key: I=important

41.7% of housing development experts considered source of funding as ‘fairly important’ to HDS; while 41.7% considered building style as ‘fairly important’. However, 54.2% considered obtaining planning approval before commencement of construction as ‘fairly important’. More so, 54.2% of housing development experts considered the use of registered building contractor/builder ‘not important at all’. 50% of HDE considered a 10-year repayment term of housing loan as ‘important’. While 41.7% considered evidence/promise of infrastructure as ‘important’. Among HDE respondents, 58.3% considered building up the entire site as ‘fairly important’.

**8.2.3.3 Professional Experience and Representation (VC5, 10, 11, 12, 13):** These variables investigate the involvement of housing development experts in relation to HDS in Lagos. Tables 8.20a, b, c, and d represent data obtained.

**Table 8.20 (a-d) Professional Experiences and Representation****Table 8.20a-VC5, and VC10**

| Variable  | Frequency (n = 24) | Percent     |
|---|--------------------|-------------|
| <b>Respondent's involvement in HDS in Lagos VC-5</b>    |                    |             |
| Yes directly  | 7                  | 29.2        |
| Yes indirectly  | 6                  | 25.0        |
| No  | 5                  | 20.8        |
| Not applicable  | 6                  | 25.0        |
| <b>Total</b>  | <b>24</b>          | <b>100</b>  |
| <b>Adequacy of current roles of professionals VC-10</b> |                    |             |
| Not adequate at all                                     | 7                  | 29.2        |
| Fairly adequate   | 5                  | 20.8        |
| Neutral   | 5                  | 20.8        |
| Adequate  | 3                  | 12.5        |
| <b>Very adequate</b>                                    | <b>4</b>           | <b>16.7</b> |

**Table 8.20b-VC11 Professional Development criteria**

| Development criteria VC-11  | Frequency (%) n = 24 |           |          |           |           |
|-----------------------------|----------------------|-----------|----------|-----------|-----------|
|                             | Not at all           | Fairly I  | Neutral  | Important | Very I    |
| Housing needs               | 3 (12.5)             | 10 (41.7) | 4 (16.7) | 3 (12.5)  | 4 (16.7)  |
| Government policy           | 0 (0)                | 13 (54.2) | 2 (8.3)  | 4 (16.7)  | 5 (20.8)  |
| Profit motive               | 0 (0)                | 11 (45.8) | 0 (0)    | 13 (54.2) | 0 (0)     |
| Availability of finance     | 0 (0)                | 9 (37.5)  | 0 (0)    | 12 (50.0) | 3 (12.5)  |
| Provision of infrastructure | 0 (0)                | 8 (33.3)  | 0 (0)    | 12 (50.0) | 4 (16.7)  |
| Location of land            | 2 (8.3)              | 15 (62.5) | 2 (8.3)  | 1 (4.2)   | 4 (16.7)  |
| Tenure                      | 0 (0)                | 18 (75.0) | 2 (8.3)  | 2 (8.3)   | 2 (8.3)   |
| Government subsidy          | 9 (37.5)             | 4 (16.7)  | 2 (8.3)  | 8 (33.3)  | 1 (4.2)   |
| Access to land              | 0 (0)                | 2 (8.3)   | 0 (0)    | 12 (50.0) | 10 (41.7) |

**Table 8.20c-VC 12 Impact of Importation on the Professional**

| Impact of importation VC-12  | Frequency (%) n = 24 |           |          |           |          |
|------------------------------|----------------------|-----------|----------|-----------|----------|
|                              | Not at all           | Fairly I  | Neutral  | Important | Very I   |
| Syncretism/ designs          | 2 (8.3)              | 12 (50.0) | 4 (16.7) | 4 (16.7)  | 2 (8.3)  |
| Cultural response            | 0 (0)                | 6 (25.0)  | 1 (4.2)  | 13 (54.2) | 4 (16.7) |
| Climatic conditions          | 2 (8.3)              | 6 (25.0)  | 2 (8.3)  | 10 (41.7) | 4 (16.7) |
| Building material            | 0 (0)                | 7 (29.2)  | 2 (8.3)  | 11 (45.8) | 4 (16.7) |
| Technology/capacity building | 2 (8.3)              | 16 (66.7) | 1 (4.2)  | 3 (12.5)  | 2 (8.3)  |
| Building activity            | 1 (4.2)              | 4 (16.7)  | 1 (4.2)  | 16 (66.7) | 2 (8.3)  |
| Regulations and standards    | 7 (29.2)             | 10 (41.7) | 1 (4.2)  | 3 (12.5)  | 3 (12.5) |

**Table 8.20d-VC13 Direct professional representation**

| Description of their direct professional representation VC-13 | Frequency N=24 | Percent    |
|---|----------------|------------|
| Institutional policy-advisory                                 | 2              | 8.3        |
| Institutional policy-implementation                           | 2              | 8.3        |
| Institutional policy-monitoring                               | 1              | 4.2        |
| Organizational policy-advisory                                | 5              | 20.8       |
| Organizational policy-implementation                          | 2              | 8.3        |
| Organizational policy-monitoring                              | 1              | 4.2        |
| None of the above   | 11             | 45.8       |
| <b>Total</b>  | <b>24</b>      | <b>100</b> |

Key:I=important

From table 8.20(a-d), it is evident that 20.8% of HDE respondents considered that their expertise is of consequence to the overall outcome of HDS in Lagos and 50% perceive syncretism in design as ‘fairly important’. However, 75% of respondents considered tenure as ‘fairly important’ to development criteria while 16.7% consider provision of infrastructure as ‘very important’ to development criteria. Only 12.55% of housing development experts consider their roles as adequate in the HDS of Lagos.

**8.2.3.4 Perception of Standards in HDS (VC-6,7,8,9):** The following variables in table 8.21 sought to investigate the perception of standards among housing development experts. On a scale of one to five, 37.5% of housing development experts were ‘fairly inclined’ to the use of PPP for housing delivery. The study data obtained shows that 29.2% of HDE respondents’ favoured governments’ provision of land and finance for households and housing development actors/partners. Among HDE respondents, 45.8% considered the current building regulation and standards not satisfactory and inadequate; and 41.7% of respondents favoured the single-family house typology as the route to adequate housing delivery.

**Table 8.21** Housing Development Experts’ perception of standards in HDS of Lagos.

| <b>Experts inclination to use of PPP VC-6</b>   | <b>Frequency n=24</b> | <b>Percent</b> |
|---|-----------------------|----------------|
| Not inclined  | 3                     | 12.5           |
| Fairly inclined   | 9                     | 37.5           |
| Neutral   | 5                     | 20.8           |
| Inclined  | 4                     | 16.7           |
| Strongly inclined   | 3                     | 12.5           |
| <b>Total</b>  | <b>24</b>             | <b>100</b>     |
| <b>Government subsidy considered appropriate for partnership VC-7</b>                 |                       |                |
| Government provides secure land/title only  | 4                     | 16.7           |
| Government provides funding (long/short term) for developers                          | 8                     | 33.3           |
| Government provides finance for households  | 5                     | 20.8           |
| Government provides land and finance for developers and households                    | 7                     | 29.2           |
| <b>Total</b>  | <b>24</b>             | <b>100</b>     |
| <b>Satisfaction with current building regulations &amp; standards in Lagos VC-8</b>   |                       |                |
| Not satisfactory  | 11                    | 45.8           |
| Fairly satisfactory   | 4                     | 16.7           |
| Neutral   | 5                     | 20.8           |
| Satisfactory  | 4                     | 16.7           |
| <b>Total</b>  | <b>24</b>             | <b>100</b>     |
| <b>Single family house per plot is route to achieving require house quantity VC-9</b> |                       |                |
| Yes   | 10                    | 41.7           |
| No  | 7                     | 29.2           |
| Don’t know  | 7                     | 29.2           |
| <b>Total</b>  | <b>24</b>             | <b>100</b>     |

### 8.3 Data Analysis

Field survey data was analyzed using Epi-info version 3.5.1 and SPSS version 15 software. The results presented herein are in tables, pie charts, bar charts, and cross-tabulations. The Odd ratio had 95% confidence interval. Fishers's exact test enabled testing for association between Housing Delivery System (HDS) and its determinants for levels of significance; and subsequent significance tests using Chi-Square tests further verified the validity of the results obtained.

These analyses tested the hypothesis of this study for acceptance or rejection; and to reveal possible association between variables and factors thought to be essential and desirable among the three interrelated components of HDS namely PPP, AHD, and Housing Typologies (HT). The emerging results from the analysis aided in developing deductions and inferences for the conclusions herein as well as the development of predictive models as originally set out in this work.

#### 8.3.1 Hypothesis One

Factors such as tenure, household income, housing typology (layout and design), provision of infrastructure, housing design preference/taste, process costs, and levels of building activity regulations are not the main determinants of HDS in Lagos.

##### 8.3.1.1 Hypothesis 1.1(TenureVA-1):

By using the measurement of tenure adopted in this study with the use of Fisher's exact test and the data collected and presented in table 8.1, the data analyzed and the result of the analysis are as presented in table 8.22A and 8.22B

**Table 8.22A:** Test result for Associations between Housing tenure and housing typology

| Variable                         | Housing typology (%) |                        |                               |                         |                 | Fishers' exact p |
|----------------------------------|----------------------|------------------------|-------------------------------|-------------------------|-----------------|------------------|
|                                  | Bungalow<br>n = 56   | Flat in block<br>n = 7 | Semi-detached house<br>n = 19 | Detached house<br>n = 6 | Total<br>n = 88 |                  |
| <b>Housing tenure</b>            |                      |                        |                               |                         |                 |                  |
| Ownership with government title  | 0 (0)                | 0 (0)                  | 0 (0)                         | 1 (100)                 | 1               | 0.00*            |
| Ownership with allocation letter | 10 (35.7)            | 7 (25.0)               | 7 (25.0)                      | 4 (14.3)                | 28              |                  |
| Ownership without title          | 0 (0)                | 0 (0)                  | 2 (100)                       | 0 (0)                   | 2               |                  |
| Rental                           | 46 (86.8)            | 0 (0)                  | 6 (11.3)                      | 1 (1.9)                 | 53              |                  |
| Squatter                         | 0 (0)                | 0 (0)                  | 4 (100)                       | 0 (0)                   | 4               |                  |

\*Significant

From table 8.22A it shows that there is an association between tenure (ownership with government title) and housing typology. The Fisher's exact P-value is less than (and not equal to 0.05; P=0.00). Given that most research result from the literature reviewed is supportive of

this direction and a further test of significance was carried out as in table 8.22B, using the chi-square  $X^2$ , and the inference is established as follows:

The Null Hypothesis ( $H_0$ ) is rejected and the Alternate Hypothesis ( $H_1$ ) is accepted. This implies that tenure is determinant of HDS. However, rental tenure as against ownership tenure is predominant as shown from the results 53(60.23%) respondents out of 88-households represents rental tenure. Yet this direction in governments' policy to address rental tenure does not exist and remains unexplored at the public and PPP levels of policy formulation.

**Table 8.22B:**  $X^2$  Test Result for Tenure of Housing tenure and housing typology.

| Variable    | $X^2$ Cal. | d.f. | $X^2$ tab. | Significance | Decision                       |
|-------------|------------|------|------------|--------------|--------------------------------|
| VA-I Tenure | 117.31     | 4    | 9.488      | S*           | $H_0$ Rejected/ $H_1$ Accepted |

Unfortunately, majority of rental across the city is rooming housing which accounts for about 75% of the housing typology. In terms of the design/planning typologies no direct enablement efforts have been infused into improving the quality of delivery for the 'rooming' typology of housing.

The effect of a predominant rental tenure centered on rooming housing in Lagos among the middle to lower-income groups is that the quality of housing design, housing environment become low. Even where most middle-income households start their housing aspiration at this level, the desperation to move up the housing market affects institutional compliance, which this study identified as contraventions by households. The field survey corroborates the poor quality of housing environment from the four-housing estates surveyed in comparison to the single-family house model of the west. This shows that there is a wide gap between rental tenure and ownership tenure typology of housing in terms of Adequacy.

Similarly, from the field survey pictures, PPP estates have improved design quality as against the public or the public-corporate estate housing typology for the middle-income. This means that PPP is more likely to improve adequacy in terms of quality of design and hence, quality of housing which is one of the elements of the universal objectives of HDS.

This study data opens up a plethora of possibilities in the use of PPP estate development with specific inclusion of the rental tenure in the form of 'rooming' housing typology as a housing design option of policy formally. This study observes the plausibility of improved quality at the design and environment levels with the participation of the private sector partner, as well as the increased quantity of rooming housing that is accessible to household: Thereby, creating a stopgap for households in the ultimate aspiration of higher levels of single-family housing through rental first before ownership tenure.

**8.3.1.2 Hypothesis 1.2(Income VA-8):** Measurements extracted from table 8.2 were used to compute the association between household income and the typology of housing and the results are presented in table 8.23 below.

**Table 8.23** Test results for the association of Household income and housing typology.

| Variable                     | Estate typology (%) |          |                  |                |        | Fishers' exact p |
|------------------------------|---------------------|----------|------------------|----------------|--------|------------------|
|                              | Public              | Private  | Public-Corporate | Public-Private | Total  |                  |
|                              | n = 56              | n = 11   | n = 14           | n = 7          | n = 88 |                  |
| <b>Educational</b>           |                     |          |                  |                |        |                  |
| Trade school                 | 0 (0)               | 0 (0)    | 1 (100)          | 0 (0)          | 1      | 0.12             |
| Primary                      | 1 (50.0)            | 0 (0)    | 1 (50.0)         | 0 (0)          | 2      |                  |
| Secondary                    | 23 (67.6)           | 3 (8.8)  | 4 (11.8)         | 4 (11.8)       | 34     |                  |
| Tertiary                     | 32 (65.3)           | 6 (12.2) | 8 (16.3)         | 3 (6.1)        | 49     |                  |
| Professional membership      | 0 (0)               | 2 (100)  | 0 (0)            | 0 (0)          | 2      |                  |
| <b>Employment type</b>       |                     |          |                  |                |        |                  |
| Public                       | 3 (75.0)            | 0 (0)    | 1 (25.0)         | 0 (0)          | 4      | 0.39             |
| Private non-self             | 24 (70.6)           | 5 (14.7) | 4 (11.8)         | 1 (2.9)        | 34     |                  |
| Private self                 | 20 (52.6)           | 6 (15.8) | 6 (15.8)         | 6 (15.8)       | 38     |                  |
| Others                       | 9 (75.0)            | 0 (0)    | 3 (25.0)         | 0 (0)          | 12     |                  |
| <b>Income (₦)</b>            |                     |          |                  |                |        |                  |
| ≤ 75,000                     | 2 (50.0)            | 2 (50.0) | 0 (0)            | 0 (0)          | 4      | 0.00*            |
| 76 – 150                     | 37 (88.1)           | 0 (0)    | 5 (11.9)         | 0 (0)          | 42     |                  |
| 151 – 300                    | 15 (51.7)           | 5 (17.2) | 9 (31.0)         | 0 (0)          | 29     |                  |
| 301 – 500                    | 2 (15.4)            | 4 (30.8) | 0 (0)            | 7 (53.8)       | 13     |                  |
| <b>Sources of income</b>     |                     |          |                  |                |        |                  |
| Monthly salary               | 10 (66.7)           | 4 (26.4) | 0 (0)            | 1 (6.7)        | 15     | 0.002*           |
| Profit from trading/Contract | 22 (88.0)           | 2 (8.0)  | 1 (4.0)          | 0 (0)          | 25     |                  |
| Salary + trading profit      | 24 (52.2)           | 5 (10.9) | 11 (23.9)        | 6 (13.0)       | 46     |                  |
| Others                       | 0 (0)               | 0 (0)    | 2 (100)          | 0 (0)          | 2      |                  |

\*Significant

From table 8.23 it shows that there is a statistical significance (association) between household incomes and estate typology. The Fisher's exact P-value is less than (and not equal to) 0.05(P=0.00). This shows that household income determines the choice of housing estate typology and hence the HDS. It is evident that, 7 (53.8%) respondents are of the N301, 000 to N500, 000 per month income category and they are most likely to participate in a PPP estate typology. That, 13 respondents fall into this income category is supportive of the need of higher incomes before participation in PPP housing. Therefore, in comparison to other HDS for households, PPP is currently an expensive approach to the middle-income earner.

The documentary evidence from the literature of sales of housing in the Lagos housing market shows that the sale of case-study PPP Flat (Elegant Court estate) at a current selling price of N25million naira by the developer is beyond the reach of the institutionally established income threshold of the middle-income described in this study. This corroborates the evident correlation between income and choice of housing estate typology and this accounts for the inability of PPP policies to achieve planned objectives for middle-income. In the PPP housing estate case study (elegant-court estate), it was observed that the beneficiaries were speculators rather than direct middle-income households for which the housing was meant.

Therefore, this study data of the significance of household income in determining choice of estate typology can influence outcomes of PPP policy formulation towards creating variations to the current singular PPP model for housing delivery.

### 8.3.1.3Hypothesis 1.3(Housing typology-Layout/design VA-14,15):

The results extracted from table 8.24, indicates the association between housing typology (layout/design) and observed HDS from the samples. The independent variable of house-typology is categorized against certain qualitative attributes of households thought to be associated to HDS. The result shows that, the size of estate was significantly associated with the housing typology. Fishers' exact P=0.00 for respondents who preferred  $\leq 25$  households per estate, although they currently lived in estates where they are more than 200 housing units.

**Table 8.24** Association between Housing Typology an element of HDS and estate size.

| Variable                        | Housing typology (%) |               |                     |                |         | Fishers' exact p |
|---------------------------------|----------------------|---------------|---------------------|----------------|---------|------------------|
|                                 | Bungalow             | Flat in block | Semi-detached house | Detached house | Total   |                  |
|                                 | n = 56               | n = 7         | n = 19              | n = 6          | n = 260 |                  |
| <b>Preferred size of estate</b> |                      |               |                     |                |         |                  |
| $\leq 25$ households            | 7 (100)              | 0 (0)         | 0 (0)               | 0 (0)          | 7       | 0.00*            |
| 26 - 50 households              | 34 (75.6)            | 6 (13.3)      | 2 (4.4)             | 3 (6.7)        | 45      |                  |
| 51 - 100 households             | 12 (54.5)            | 1 (4.5)       | 7 (31.8)            | 2 (9.1)        | 22      |                  |
| 101 - 200 households            | 2 (22.2)             | 0 (0)         | 7 (77.8)            | 0 (0)          | 9       |                  |
| > 200 households                | 1 (20.0)             | 0 (0)         | 3 (60.0)            | 1 (20.0)       | 5       |                  |

\*significant

From table 8.24 above, households show preference for smaller sized housing. This establishes the aspiration between western anonymity of the city and a need for an inclusive traditional community. Therefore, to assume that households would function predictably in larger sized estates as practiced by existing policies is erroneous and misleading. The diversity of the city of Lagos has largely retained its communal delineation along various heterogeneous social lines that are not obvious to the on looker but socially sensitive to residents. This is the basis for the organizational arrangements and coalitions among households captured in nucleated forms of neighbourhoods as social focus groups.

**8.3.1.4Hypothesis 1.4(Provision of Infrastructure VA-22):** The table 8.25 shows households' response in terms of their perception of infrastructure for housing. Coded Variables 72-91 representing QA-22 shows significant association between sets of criteria used. The null hypothesis is rejected ( $H_0$ ) and the alternate accepted ( $H_1$ ).Provision of infrastructure is a determinant of HDS. More so, the P-value for significance is less than 0.00(which is less than 0.05/<5%). Therefore, provision of infrastructure is desirable and a key

determinant. Hence, in the four estate typology surveyed, all households tend to cater for their water, through boreholes/deep wells, electricity with generator and the road and drainages maintained by self-help.

**Table 8.25** Provision of infrastructure

|  | VA<br>R00<br>071<br>a- | V<br>A<br>R<br>00<br>07<br>2 | V<br>A<br>R<br>00<br>07<br>3 | V<br>A<br>R<br>00<br>07<br>4 | V<br>A<br>R<br>00<br>07<br>5 | V<br>A<br>R<br>00<br>07<br>6 | V<br>A<br>R<br>00<br>07<br>7 | V<br>A<br>R<br>00<br>07<br>8 | V<br>A<br>R<br>00<br>07<br>9 | V<br>A<br>R<br>00<br>08<br>0 | V<br>A<br>R<br>00<br>08<br>1 | V<br>A<br>R<br>00<br>08<br>2 | V<br>A<br>R<br>00<br>08<br>3 | V<br>A<br>R<br>00<br>08<br>4 | V<br>A<br>R<br>00<br>08<br>5 | V<br>A<br>R<br>00<br>08<br>6 | V<br>A<br>R<br>00<br>08<br>7 | V<br>A<br>R<br>00<br>08<br>8 | V<br>A<br>R<br>00<br>08<br>9 | V<br>A<br>R<br>00<br>09<br>0 | V<br>A<br>R<br>00<br>09<br>1 | VA<br>R00<br>092 |
|--|------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------|
| Chi-Square( a,b,c,d,e ,f,g,h,i,j, k,l) | 73.732                 | 50.90                        | 14.20                        | 21.351                       | 99.852                       | 42.256                       | 59.220                       | 78.000                       | 50.184                       | 14.375                       | 72.861                       | 62.329                       | 57.414                       | 75.514                       | 15.2875                      | 67.500                       | 71.882                       | 52.588                       | 15.9220                      | 50.279                       | 58.885                       | 107.023          |
| df                                     | 4                      | 4                            | 4                            | 3                            | 2                            | 4                            | 4                            | 4                            | 4                            | 4                            | 4                            | 4                            | 3                            | 3                            | 4                            | 4                            | 4                            | 4                            | 4                            | 4                            | 3                            | 4                |
| Asymp. Sig.                            | .000                   | .000                         | .007                         | .000                         | .000                         | .000                         | .000                         | .000                         | .000                         | .000                         | .000                         | .000                         | .000                         | .000                         | .000                         | .000                         | .000                         | .000                         | .000                         | .000                         | .000                         | .000             |

### 8.3.1.5 Hypothesis 1.5(Housing design preferences/taste VA-21, 24, 25):

The Data in table 8.26 (A-C) shows the influence of households housing design preferences based on selected attributes coded V60-70 representing VA21, V94-105 representing VA24 and V106-115 representing VA25. Table 8.26A shows that attributes of functional space in relation to design are significant. Similarly, the attributes from VA22 were found to be significant, likewise, VA25. It is conclusive to reject the null Hypothesis ( $H_0$ ) and accept the alternate ( $H_1$ ): That infrastructure provision is a determinant of HDS in Lagos.

A critical look at some of these indicators suggest that although they are significant, the percentage response were not high; for example, size of land and size of the house were indicators of respondents preference. Only 14.8% consider size of land very important in ranking. Among household respondents, 51.1% considered size of land “fairly important”. Therefore, this accounts for the sale of half-plots among households social arrangements. Observation shows that most households among middle-income are willing to accept such arrangements.

Studies such as Aradeon (1980), demonstrated the need to increase density in response to design intentions and realities of spatial use. This study observed that, single plots of land meant for single-family become housing for five or more families. Design options that fulfill realities of spatial use include, the constructing a block of flats or a row of town houses; these are often practiced in contravention of the institutional policy framework of building regulations. Housing development actors/partners increase density for economic reasons and the households would pay a premium to access such accommodation. This study shows that



households are willing to accept lesser sizes of building and land as different from perception of existing laws and regulatory framework. More so, the use of imported building materials to achieve quality is desirable among households and housing development experts. Table 8.26A shows the significance level at 0.00. In addition, the quality of preference in terms of design preference is desirable and not necessarily essential from table 8.26C.

**Table 8.26A- Functional space/size preference**

|                               | VAR0006<br>0 i-<br>lestyle<br>preference<br>-size of<br>land | VAR00<br>061 | VAR00<br>062 | VAR00<br>063 | VAR00<br>064 | VAR00<br>065 | VAR00<br>066 | VAR00<br>067 | VAR00<br>068 | VAR00<br>069 | VAR000<br>70 xi-<br>size of<br>wardrob<br>es |
|-------------------------------|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--|
| Chi-Square(a,b,c,<br>d,e,f,g) | 68.884   | 56.886       | 31.563       | 54.375       | 40.636       | 36.238       | 31.119       | 25.126       | 60.317       | 42.471       | 53.705                                       |
| df                            | 4  | 4            | 4            | 4            | 4            | 4            | 4            | 4            | 4            | 4            | 4  |
| Asymp. Sig.                   | .000   | .000         | .000         | .000         | .000         | .000         | .000         | .000         | .000         | .000         | .000   |

**Table 8.26B Quality of material/preference**

|                                 | VAR0009<br>4 i-<br>housing<br>environm<br>net<br>quality-<br>use of<br>imported<br>roofing<br>sheets | VAR0<br>0095 | VAR0<br>0096 | VAR0<br>0097 | VAR0<br>0098 | VAR0<br>0099 | VAR0<br>0100 | VAR0<br>0101 | VAR0<br>0102 | VAR0<br>0103 | VAR0<br>0104 | VAR001<br>05 xii-<br>use of<br>louvre |
|---------------------------------|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------------------------------|
| Chi-Square(a,b,c,<br>d,e,f,g,h) | 33.415   | 49.333       | 5.069        | 21.448       | 37.092       | 76.851       | 74.814       | 23.207       | 24.402       | 118.00<br>0  | 129.93<br>1  | 95.759                                |
| Df                              | 3  | 2            | 1            | 4            | 3            | 4            | 4            | 3            | 3            | 4            | 2            | 3                                     |
| Asymp. Sig.                     | .000   | .000         | .024         | .000         | .000         | .000         | .000         | .000         | .000         | .000         | .000         | .000                                  |

**Table 8.26C-Selected housing features/characteristics preferences.**

|                             | VAR001<br>06 | VAR00<br>107 | VAR00<br>108 | VAR00<br>109 | VAR00<br>110 | VAR00<br>111 | VAR00<br>112 | VAR00<br>113 | VAR00<br>114 | VAR00115 |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------|
| Chi-Square(a,b,c,d,<br>e,f) | 110.069      | 37.294       | 117.88<br>5  | 138.33<br>3  | 107.14<br>0  | 71.448       | 82.837       | 50.483       | 68.230       | 43.931   |
| df                          | 4            | 4            | 4            | 3            | 4            | 4            | 3            | 2            | 4            | 2        |
| Asymp. Sig.                 | .000         | .000         | .000         | .000         | .000         | .000         | .000         | .000         | .000         | .000     |

### 8.3.1.6 Hypothesis 1.6 (Process Costs VA-16, 17, 20):

These variables are coded as VA-16 as V17, VA-17 as V18 and VA-20 as V44-59 and presented below as tables 8.27(A-C). From table 8.27A, the chi-square value obtained,  $P=0.00$  and significant. Most households paid cash for their housing; and cash payment is significant to the entire process cost for housing. Often time's alternative arrangements are never feasible even when they are statutory in nature and in relation to institutional arrangements.

**Table 8.27A**-process cost purchase, build, or rental in access to housing among household

|               | VAR00017 |
|---------------|----------|
| Chi-Square(a) | 161.907  |
| df            | 3        |
| Asymp. Sig.   | .000     |

**VAR00018****Table 8.27B**-process cost in housing cost/purchase or construction among households

|       | Observed N | Expected N | Residual |               | VAR00018 |
|-------|------------|------------|----------|---------------|----------|
| 1.00  | 51         | 21.5       | 29.5     | Chi-Square(a) | 59.953   |
| 2.00  | 20         | 21.5       | -1.5     | Df            | 3        |
| 3.00  | 4          | 21.5       | -17.5    | Asymp. Sig.   | .000     |
| 4.00  | 11         | 21.5       | -10.5    |               |          |
| Total | 86         |            |          |               |          |

From the above table 8.27B, it is evident that costs below N5million accounted for most purchases (among householders as shown earlier in the data analyzed). Therefore, cost is significant for all ranked 1 to 4 categories,  $P=0.00$  and significant.

The analysis of the perception of process cost was in relation to the cumbersomeness in the housing process. When combined with the identified 32-stage requirements to achieve the process of home ownership and rights over a minimum period of one year as obtained from the study literature, it confirms the data results beyond perception alone. From the field survey, it is observed that, this process comes with huge official and unofficial costs attached. Most tenure from this survey that occur in all four estate typologies only have letter of allocation and the unwillingness by households to process their certificate of occupancy is associated to this problem. From table 8.27C below, the chi square value is significant at 0.00 which is less than 0.05(5%). This shows that the process costs encountered by households is highly significant in the HDS of Lagos for all scenarios thought to influence V44-59 ranked 1to5.

**Table 8.27C**-Perception of process cost in building process among households

|                               | VA<br>R00<br>044 | VA<br>R0<br>00<br>45 | VA<br>R0<br>00<br>46 | VA<br>R0<br>00<br>47 | VA<br>R0<br>00<br>48 | VA<br>R0<br>00<br>49 | VA<br>R0<br>00<br>50 | VA<br>R0<br>00<br>51 | VA<br>R0<br>00<br>52 | VA<br>R0<br>00<br>53 | VA<br>R0<br>00<br>54 | VA<br>R0<br>00<br>55 | VA<br>R0<br>00<br>56 | VA<br>R0<br>00<br>57 | VA<br>R0<br>00<br>58 | VAR<br>000<br>59 |
|-------------------------------|------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|------------------|
| Chi-Square(a,b,c,d,e,f,g,h,i) | 142.909          | 84.159               | 55.011               | 86.818               | 24.386               | 69.149               | 13.333               | 14.818               | 14.505               | 10.771               | 10.376               | 84.841               | 10.283               | 66.099               | 15.187               | 84.263           |
| Df                            | 4                | 4                    | 4                    | 4                    | 4                    | 4                    | 4                    | 4                    | 4                    | 3                    | 4                    | 4                    | 4                    | 4                    | 4                    | 4                |
| Asymp. Sig.                   | .000             | .000                 | .000                 | .000                 | .000                 | .000                 | .000                 | .000                 | .000                 | .000                 | .000                 | .000                 | .000                 | .000                 | .000                 | .000             |

Therefore, process costs' limits households' willingness to participate in the building process formally; and if they do participate, their cost of housing is usually high in a bid to recover

[illegible]

**Table 8.28B** Perception of building regulatory process among households and their preferences.

|                 | VAR<br>000<br>30<br>i- | VA<br>R00<br>031<br>ii- | VA<br>R00<br>032<br>iii- | VA<br>R00<br>033<br>iv- | VAR<br>000<br>34<br>v- | VAR<br>000<br>35<br>vi- | VAR<br>000<br>36<br>vii- | VA<br>R00<br>37<br>viii- | VAR<br>000<br>38<br>ix- | VAR<br>000<br>39<br>x- | VA<br>R00<br>040<br>xi- | VA<br>R00<br>041<br>xii- | VA<br>R00<br>042<br>xiii- | VA<br>R00<br>43<br>xiv- |
|-----------------|------------------------|-------------------------|--------------------------|-------------------------|------------------------|-------------------------|--------------------------|--------------------------|-------------------------|------------------------|-------------------------|--------------------------|---------------------------|-------------------------|
| Chi-Square(a,b) | 75.295                 | 43.977                  | 116.659                  | 107.540                 | 48.818                 | 178.460                 | 155.977                  | 136.886                  | 182.568                 | 105.750                | 117.795                 | 79.045                   | 124.045                   | 67.795                  |
| df              | 4                      | 4                       | 4                        | 4                       | 4                      | 4                       | 4                        | 4                        | 4                       | 4                      | 4                       | 4                        | 4                         | 4                       |
| Asymp. Sig.     | .000                   | .000                    | .000                     | .000                    | .000                   | .000                    | .000                     | .000                     | .000                    | .000                   | .000                    | .000                     | .000                      | .000                    |

From the literature, selected criteria's were developed to test the perception of households to building regulatory process. Table 4.28B above shows that the criteria's are significant with values  $P = 0.00 (< 0.005 \text{ and } < 5\%)$ . Government allocation for land acquisition among respondents was 47.7% and 'very important' while 36.4% considered land acquisition as 'important' only on a scale of five options. However, 77.3% of households considered the location of housing as 'very important' while only 2.3% responded 'not at all'. Therefore, even though housing location relative to city limits and central business districts were 'very important' to household respondents the need to access government allocated land for immediate use or speculation outweighs the indicated proximity that is desirable by households. Among household respondents, 68.2% considered compliance to pre-planning approval documentations as 'fairly important'. This accounts for the wide spread contravention observed in the land use concept as earlier indicated. Since a large number of people, perceive that they can achieve their housing objectives outside of the disparate building regulatory framework. This is also in tacit connivance with government officials who benefit from this directional outlay of the entire HDS.

**8.3.1.8 Hypothesis 1.8 (the housing delivery systems HDS):** From the research development, HDS as a 'system' was established and this reflects the basic attributes of GST Linear-equations. The data collected from the field study shows that the three stakeholders' delineated (households, housing development actors/partners and housing experts) and the four-estate typologies surveyed are directly associated to the outcomes of the choice of HDS. The determining variables analyzed in the data presented are significant to the elements of HDS.

The segmentation of the variables shows how intricate linear qualitative descriptions are limited yet interrelated. Under a single variable there could be as many as 25-attributes, which

is insufficient to describe the essence of that variable. To ascertain the overall direction of interacting variables and subsystems within a specific setting for HDS, it is imperative to deduce an equation that takes into account as many dimensions/variables of the HDS as can be captured; as well as those thought to be relevant to the universal objectives of HDS identified in this study as the 3Q-factor.

Therefore, based on the objective directions of this study to delineate the determinants of HDS, this analysis culminates in the development of a predictive equation/model for determining HDS. This equation defines the correlation between the deduced elements of HDS called the dependent variables and independent variables significant to HDS from which the data of this study emanated within a given context (of city, organization of country).

The linear correlation is represented as, Housing Delivery Systems (H) =P+T+A+E

Let H be the HDS of a given city, organization or country K, let P be the Public Private Partnership, let T be the housing typology for the said H, of K and Let A be the Adequacy factor in H of K.

Then,

$$\mathbf{H=P+T+A+E.....(1)}$$

$0 \leq H \leq 1$ , each of P, T, and A are factors of 1 or 100%.

$E \rightarrow 0$  as the elements of P, T and A are properly refined.

Note: H is an interval function which oscillates between 0 and 1.

We use the following interpretations;

- a).  $H=0$  or  $0\% \rightarrow$  a non existing HDS.
  - b).  $0 < H \leq 0.25$  or  $H \leq 25\% \rightarrow$  a poor HDS
  - c).  $0.25 < H \leq 0.5$  or H is greater than 25%, but less than or equal to 50% implies HDS is fair
  - d).  $0.5 < H \leq 0.75$  or H is greater than 50% but less than or equal to 75% implies that HDS is good.
  - e).  $0.75 < H \leq 1$  or H is greater than 75% but less than or equal to 100% implies HDS is excellent.
-

The cases of  $H=0$ , and  $H=1$  may never really occur as these are very extreme value cases.

This study places premium on 'A' component in the 'H' (A is both a component and subsystem of H).

The 'A' factor is equally analyzed using the same scale of 0 to 1 but the interpretations shall be Poor, inadequate, fairly adequate, adequate and very adequate for each of 5-levels respectively as in the case of 'H'.

Consider equation (1)

$$H=P+T+A=X$$

Or

$$H=\sum_{i=1}^3 x_i \dots \dots \dots (2)$$

Where  $X_1=P, X_2=T$  and  $X_3=A$

Three equations of the subsystems that make up the HDS emerge as follows:

$$X_1=\sum_{i=1}^L P_i \dots \dots \dots (3)$$

$i=1,2,3 \dots L$  are the various elements or subsystems that determine P or  $X_1$  as defined in (2)

$$X_2=\sum_{i=1}^M T_i \dots \dots \dots (4)$$

$i=1,2,3 \dots M$  are the various elements or subsystems that determine T or  $X_2$  as defined in (2).

Similarly,

$$X_3=\sum_{i=1}^N A_i \dots \dots \dots (5)$$

$i=1,2,3, \dots, N$  are the various elements or subsystems that determine A or  $X_3$  as defined in (2).

From equations 3,4,5

$$X_1=p_1+p_2+p_3+\dots+p_L (L=12)$$

$$X_2=t_1+t_2+t_3+\dots+t_m (m=12) \dots \dots \dots (6)$$

$$X_3=a_1+a_2+a_3+\dots+a_n (n=12), \text{ respectively.}$$

Each of these elements are the determinants of their respective  $X_i (i=1,2, 3)$

Therefore, from equation 2,3,4, and 5

Equation (1) can be expressed as

$$\begin{aligned} H &= \sum_{i=1}^L P_i + \sum_{i=1}^M T_i + \sum_{i=1}^N A_i \\ &= \sum_{i=1}^{LNM} (P + T + A)_i \dots \dots \dots (7) \end{aligned}$$

This last expression should be within the interval

$$0 \leq [\sum_{i=1}^{LNM} (P + T + A)_i] \leq 1$$

Obtaining values for L,N,M and i for corresponding  $(P,T,A)_i$  shall be deduced from the data as follows;

From equation (2) and (5)

$$X_3 = A = \sum_{i=1}^N A_i \dots \dots \dots (8)$$

$i = 1, 2, 3, \dots, N$  are the various elements that determine 'A' as defined in (2)

The complexity of equation (7) gives an indication to the interplay of variables which makes for an emergent determinant of HDS=H. Similarly, adequacy represented by equation (8) shows the interplay of various elements and subsystems.

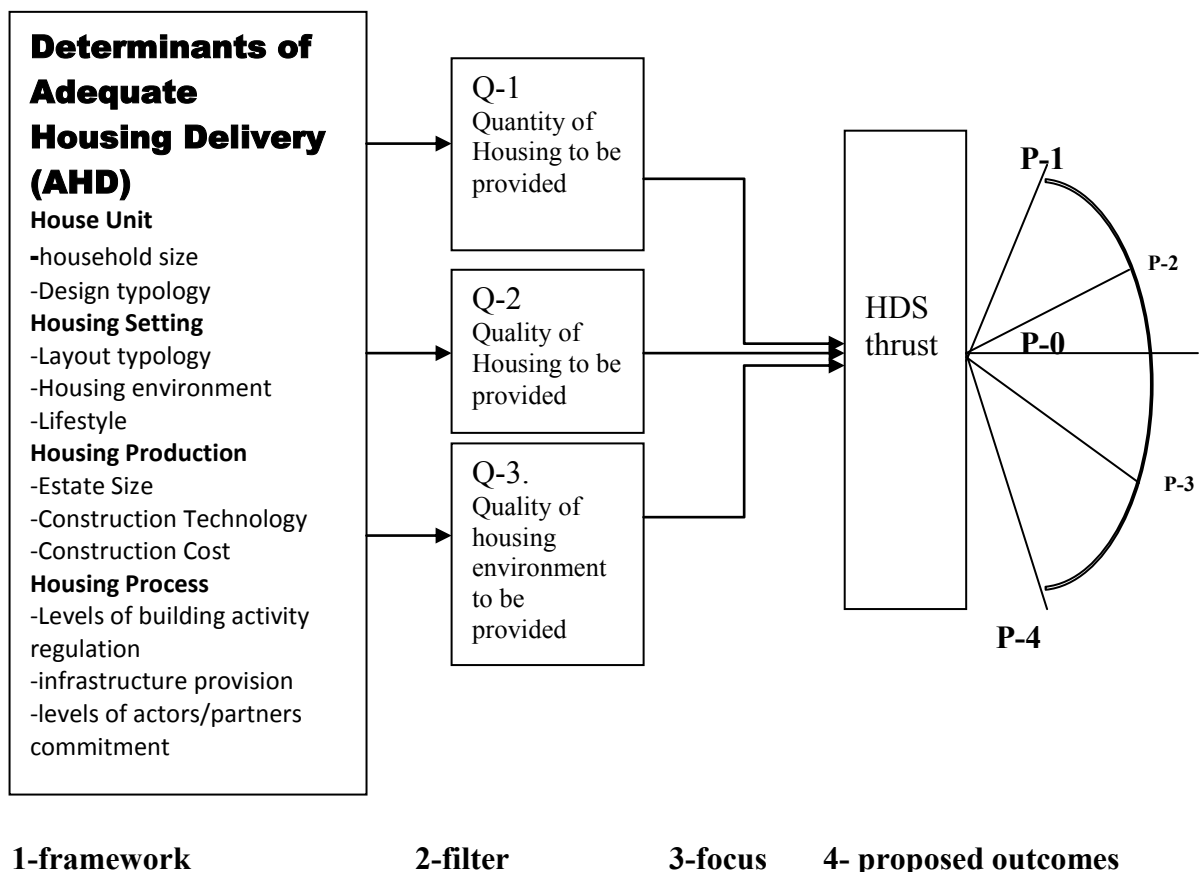
However, two major controlling factors are the determinants of 'A' with subsets. To establish 'A' there must be a tendency or thrust in a determinate direction which is observed as, economic, technology, social, political etc; in this case the thrust is partnership, but motivated by what? The overriding influence is the tendency/thrust and it is decisive to the overall outcome of choice of HDS by actors/partners. In this research, the elements and components of HDS manifest in planning and design terms as estate typologies (for ease of assessment). The four estate typologies become the thrust and any other newer variation is a product of the stakeholders' ingenuity to manipulate their institutions and organizations.

From the above this thesis demonstrated that certain factors thought to be determinants of HDS are truly determinants at certain circumstances but due to the systems nature of HDS are not major in certain other circumstances; there were evidences of interchangeability among dependent and independent variables depending on the thrust of the HDS. A factor such as Tenure is an independent variable derived from the subsets of HDS stakeholders'. Although, ownership is the predominant aspiration among households but rental tenure accounts for over 75% of rental housing in Lagos. Among the four-estate typology surveyed, ownership tenure becomes a dependent variable when analyzed against household income, and other determinants of HDS derived from independent variables of this study. However, in the HDS of Lagos, rental is evidently the predominant culture yet ownership tenure is desirable and influences HDS. The behavior of tenure supports the General Systems Theory used in explaining this work. More so, when tenure is in association with duration of stay, it may not be significant to transitory households who form a part of the middle-income group. However, from the data obtained, once duration of households exceeds 6years, households' rental tenure preferences change, it takes on a tendency to pursue ownership tenure, and it increases over time for as long as the aspiration lingers. The reasons may not be fully understood from this study but the indicators are present.

Therefore, from the above equation and analysis, it is clear that the factors and variables drawn thought to be the determinants of AHD are indeed succinct to the universal objectives of HDS.

Figure 8.6 shows a schematic synthesis of this research development. There are four elements of the synthesis namely; the framework for AHD, the filter of the HDS, the focus of the HDS expressed as a subsystem or a thrust and the measurable outcome delineated in four overlapping segments of a spectrum. This study demonstrates that the derivatives of HDS are indeed the universal objectives of HDS called the 3-Q factors; each of these objectives can define the thrust of HDS by determining a direction for stakeholders' objectives. That the outcome of HDS is measurable for adequacy is possible.

The HDS is an ensemble of stakeholders involved in settings and activities. The settings include their role-based structure such as their institutional and organizational arrangements, and their social and environmental settings. Their coalitions and hierarchy of needs, which motivates their activities, are diverse and governed by their objectives.



**Figure 8.6 Schematic Proposal (Model) for Adequacy Evaluation Technique (AET)**

(Author). \*This is deduced from equation above.

**Note:** The absence of financing is deliberate; the debate around financing is such that it can be treated as a dependent variable in this circumstance. Since the framework bears the independent variables upon which slight adjustments to the needs criteria of stakeholders creates considerable shifts to financing requirements. By regulating the framework into a thrust, which fulfills the universal objectives for the given HDS, financing can be more realistic and determinate hence a dependent variable to the framework as above. This is a departure from finance as an independent variable to target-cost based housing policy framework, which currently dominates the housing debate.



The framework for housing emanates from the need to achieve AHD; this need is filtered through 3Q-factor to develop a focus/thrust within which a typology/subsystem of HDS would emerge such as PPP. The region of PPP is from absolute zero upwards to P2 and beyond P2 it tends towards public housing P1; similarly, it can tend downwards to P3, beyond which it tends to private housing P4. Therefore, the chances of efficiency for PPP lies between P2 and P3. Finding the optimum is dependent on the HDS thrust/focus and the strategic choice made by actors/partners.

**Where** P-1 is Public limit, P-2 is the limit of P-1, P-0 is absolute value of PPP, and it is non-existent, and P-4 is Private limit, P-3 is the limit of P-4.

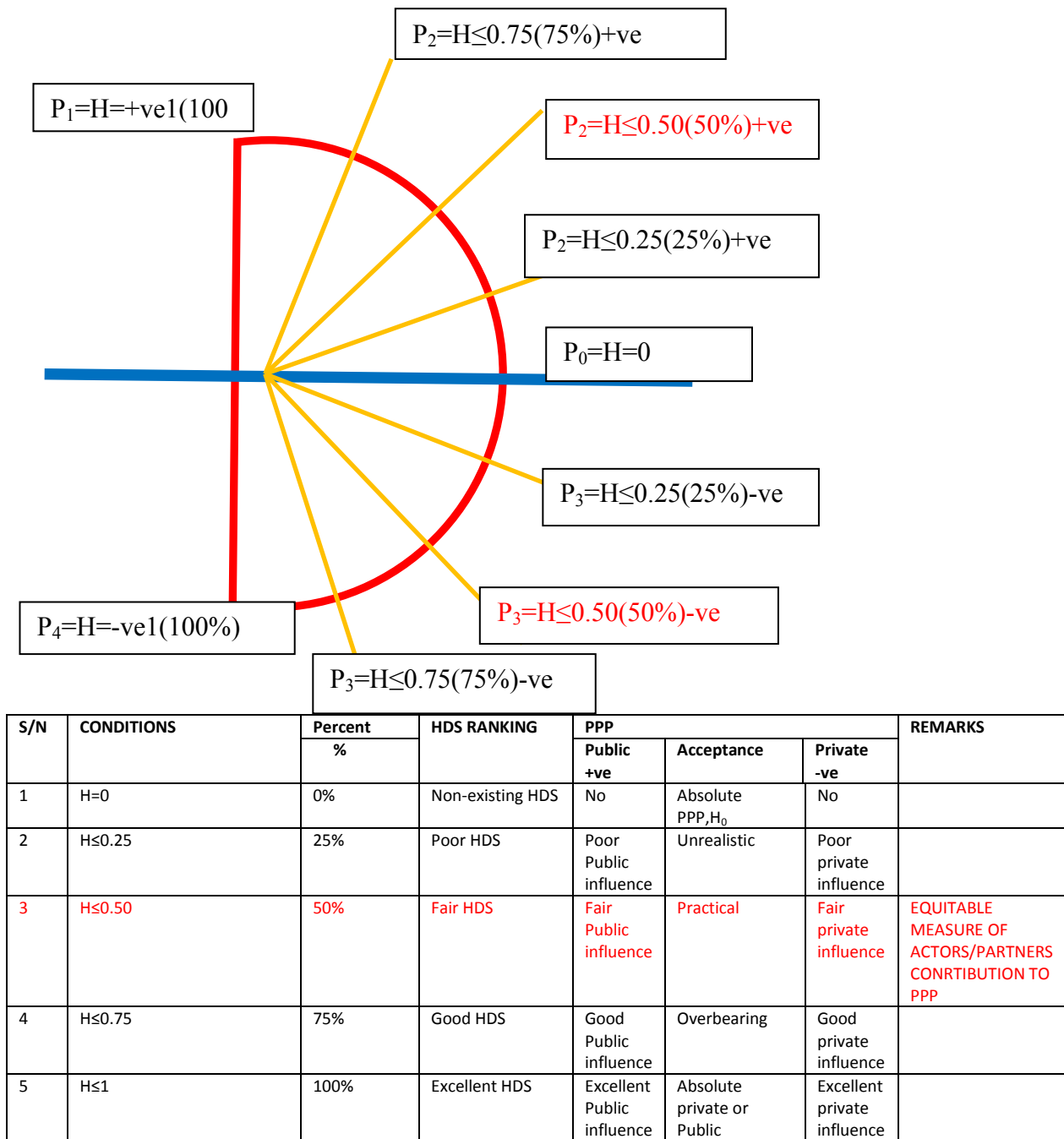
Therefore:

- a). P-1 to P-2 is the region of Public-Corporate Limits; a movement towards P-1 reduces the profit motive among actors/partners and a movement towards P-2 increases the profit motive.
- b). P-2 to P-0 is PPP variation towards Public-corporate limits
- c). P-0 is the absolute value of PPP, which is non-existent.
- d). P-0 to P-3 is the PPP variation towards Private limits; a movement towards P-0 reduces profit motive and movement towards P-3 increases profit motive.
- e). P-2 to P-3 is the PPP region of variation and flexibility; this region allows flexibility due to changing roles and circumstances of actors/partners in relation to other variables. Most HDS variations, which are enablement and supporter based, exist within this sector.
- f). P-3 to P-4 is the region of strict private enterprise. Movement towards P-3 reduces profit motive and movement towards P-4 increases profit motives.

By defining the HDS thrust, the outcomes of housing objectives can be predictive from the above model.

The derived spectrum from figure 8.6 is expanded to figure 8.7 below for clarity and applicability by numeric values of measure.

**Figure 8.7** HDS-PPP Measurement for acceptance or rejection of actors/partners influence



**KEY:** H=0(0%) non-existing HDS: H≤0.25(25%)poor hds: **H>0.25(25%) but ≤0.50(50%) fair HDS:** H>0.50(50%) but ≤0.75(75%) good HDS: H>0.75(75%) but ≤ 1(100%) excellent HDS

From figure 8.7, actors/partners commitment is measureable in relative numeric terms. Eleven sets of criteria used (under four sub-headings of AHD) from figure 8.6 shows the indicators for AHD. Therefore, this qualitative model corroborates the quantitative equation earlier deduced as equation (7) and (8) for HDS and AHD respectively.

To make a strategic choice of an HDS a three step AET is proposed;

Step-1 Stakeholders delineation (from figure 8.8)

Step-2 3Q factor definition (from figure 8.6)

Step-3 Optimization process (from figure 8.8)

In order to ascertain acceptability the figures generated qualitatively or quantitatively from step-3 is benchmarked against figure 8.7. Therefore, upon determination of stakeholders' delineation from the quantitative or qualitative approach as above, alongside the deterring thrust derived from 3-Q factors; the third stage by this study involves the optimization process, which is qualitative in nature. Figure 8.8 below is a schematic proposal, which this study calls the AET of HDS for optimization of resources and process (implicit to stakeholder's delineation). The optimization process refines the plausible thrust of step-2 (definition of 3-Q factor thrust).

**Figure 8.8 Adequacy Evaluation Technique (AET) for Housing Delivery Systems and subsystems' optimization of resources and processes.**

| <b>A R R A N G E M E N T S</b><br>(Institutional and Organizational)<br>*Where HDS objective is to increase Quantity of housing, improve Quality of Housing and Improve Quality of Housing environment(3-Qfactors)   |  |  |   |  |  |   |
|--|--|--|---|--|--|---|
| <b>Stakeholders Classification</b>   | <b>HDS (thrust) Public Estate typology-1</b> | <b>HDS (thrust) Public-corporate estate typology-2</b> | <b>HDS (thrust) Private estate typology-3</b> | <b>HDS (thrust) Public-private estate typology-4</b> | <b>HDS (thrust) (n) n=newer HDS typology</b> | <b>Social optimization (implicit: Based on AHD)</b> |
| Households   | $R_o$<br>$P_o$                               | $R_o$<br>$P_o$   | $R_o$<br>$P_o$                                | $R_o$<br>$P_o$                                       | $R_o$<br>$P_o$                               | Lifestyle/Aspiration                                |
| Housing Development Actor/Partner  | $R_o$<br>$P_o$                               | $R_o$<br>$P_o$   | $R_o$<br>$P_o$                                | $R_o$<br>$P_o$                                       | $R_o$<br>$P_o$                               | Lifestyle/Aspiration                                |
| Housing Development Expert   | $R_o$<br>$P_o$                               | $R_o$<br>$P_o$   | $R_o$<br>$P_o$                                | $R_o$<br>$P_o$                                       | $R_o$<br>$P_o$                               | Lifestyle/Aspiration                                |
| <b>FILTER (OUTPUT)</b>   | 3Q-factors                                   | 3Q-factors   | 3Q-factors                                    | 3Q-factors   | 3Q-factors                                   |   |
| <b>O U T C O M E S</b><br>a-Improved HDS in terms of subsystem(PPP); architecturally expressed as a housing setting typology(in this case housing estate)<br>b-Achievement of HDS Objectives<br>c-Improved HDS arrangements among stakeholders categories. |  |  |   |  |  |   |

**NOTES:**

**$R_o$** = Resource optimization of each stakeholder:  **$P_o$** =Process optimization for each stakeholder  
Where  $R_o$  and  $P_o$  are the parametric/non-parametric outcome of variables identified as determinants for the set out objectives; their value labels and weights are established based on the 3Q-factor objectives for HDS. The set-out objectives is expressed architecturally as an HDS subsystem of estate typology. Values of  $R_o$  and  $P_o$  are in constant contact but tappers away in importance from each other (represented by the diagonal in the Table above)  
The evaluation technique is based on a plethora of variables/components of HDS which actors/partners consider relevant; however there must be an consensus as to the thrust in terms of direction for optimization.(what we agree to optimize in relation to the project specific problems/issues)

The applicability of figure 8.8 involves the participation of stakeholders and a clear understanding of the social context by housing experts or both the public and the private sector partners.

For practical purposes, it is suggested that experts independent of the partnership are selected to moderate the outcomes. This would increase the participatory approach needed to refine the outcomes of architectural theories rather than the use of existing and restrictive design/layout typologies that does not represent the realities of spatial use for stakeholders.

**8.3.2 Hypothesis Two:** Factors such as Provision of infrastructure, Property Price, Access to financing, Access to Land, profit motive and levels of actors/partners commitment are not the main determinants of Public-Private Partnerships contributions.

From the tables (8.29, 8.30, and 8.31A and B) below, the study tested for significant association between actors/partners socio-demographics and the factors thought to be determinants of PPP contributions.

The results show that Household access to finance is significant to PPP contribution (Table 8.29). The P-value ( $P=0.00$ ) thought to be significant is for upper middle-income groups who can afford between N301, 000-N500, 000 per month as income. In addition, there is a lesser observed P-value for the income group between N76, 000-N150, 000 per month in the results. The corresponding odds ratio for these values is 0.00. This is indicative that income/access to finance is a determinant of PPP contributions.

However, the odds ratio for both categories of typology among age groups 30- years and below show occurrence of PPP participation. Therefore, the Null Hypothesis ( $H_0$ ) that these factors do not determine the commitment of PPP actors/partners is rejected. By so this research accepted the alternate hypothesis ( $H_1$ ); that these factors affect actors/partners commitment.

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**Table 8.29:** Associations between socio-economic characteristics and estate typology

| Variable                     | Public-Private Estate Typology (%) |        |        | Odd ratio | 95% CI |        | Fisher's exact p |
|------------------------------|------------------------------------|--------|--------|-----------|--------|--------|------------------|
|                              | Yes                                | No     | Total  |           | Lower  | Upper  |                  |
|                              | n = 7                              | n = 81 | n = 88 |           |        |        |                  |
| <b>Education</b>             |                                    |        |        |           |        |        |                  |
| Trade school                 | 0 (0)                              | 1      | 1      | 0.00      | 0.00   | 229.41 | 1.00             |
| Primary                      | 0 (0)                              | 2      | 2      | 0.00      | 0.00   | 57.23  | 1.00             |
| Secondary                    | 4 (11.8)                           | 30     | 34     | 2.27      | 0.39   | 13.91  | 0.42             |
| Tertiary                     | 3 (6.1)                            | 46     | 49     | 0.57      | 0.09   | 3.29   | 0.70             |
| Professional membership      | 0 (0)                              | 2      | 2      | 0.00      | 0.00   | 57.23  | 1.00             |
| <b>Employment type</b>       |                                    |        |        |           |        |        |                  |
| Public                       | 0 (0)                              | 4      | 4      | 0.00      | 0.00   | 21.70  | 1.00             |
| Private non-self             | 1 (2.9)                            | 33     | 34     | 0.24      | 0.01   | 2.21   | 0.24             |
| Private self                 | 6 (15.8)                           | 32     | 38     | 9.19*     | 1.01   | 212.23 | 0.04*            |
| Others                       | 0 (0)                              | 12     | 12     | 0.00      | 0.00   | 5.26   | 0.59             |
| <b>Income (₦)</b>            |                                    |        |        |           |        |        |                  |
| ≤ 75,000                     | 0 (0)                              | 4      | 4      | 0.00      | 0.00   | 21.70  | 1.00             |
| 76 – 150                     | 0 (0)                              | 42     | 42     | 0.00*     | 0.00   | 0.79   | 0.01*            |
| 151 – 300                    | 0 (0)                              | 29     | 29     | 0.00      | 0.00   | 1.53   | 0.09             |
| 300 – 500                    | 7 (53.8)                           | 6      | 13     | -         | -      | -      | 0.00*            |
| <b>Sources of income</b>     |                                    |        |        |           |        |        |                  |
| Monthly salary               | 1 (6.7)                            | 14     | 15     | 0.80      | -      | -      | 1.00             |
| Profit from trading/Contract | 0 (0)                              | 25     | 25     | 0.00      | 0.00   | 1.92   | 0.19             |
| Salary + trading profit      | 6 (13.0)                           | 40     | 46     | 6.15      | 0.68   | 141.74 | 0.11             |
| Others                       | 0 (0)                              | 2      | 2      | 0.00      | 0.00   | 57.23  | 1.00             |

\*Significant

More so, it is observed from table 8.29 that, the P-values (0.004, which is less than 0.005) for private self-employed is significant in relation to choice of PPP estate typology of choice. More private self- employed households are likely to afford the cost implication and needed cash payments for ownership. The significance in the two income categories (N76,000-N150,000 and N300,000-N500,000 per month) shows that certain undisclosed sources of income are responsible for the affordability when matched with the indicator of self-employment. This explains the absence of mortgage yet households show marked affordability to acquire housing. By so, access to finance is not limited by institutional arrangements and can be achieved through the organizational arrangements of actors/partners and households to achieve their housing objectives.

Therefore, government provided financing within the social arrangement of HDS in Lagos is a plus but not significantly important as a determinant of HDS. Since most households, actors/partners would achieve their housing aspirations independent of government financing.

Similarly, there are no associations of significance between Age, sex, marital status, geo-political origin, religion, and household size to the housing estate typology for PPP contributions and other three estates typologies as shown in table 8.30. Therefore, from table 8.30, households' are not motivated by their socio-demographic characteristic in their choice of estate typology.

**Table 8.30:** Associations between socio-demographic characteristics and two categorical estate typologies-PPP and P, PC, PR.

| Variable                    | Estate typology (%) |              |        | Odds ratio | 95% CI |        | Fisher's exact p |
|-----------------------------|---------------------|--------------|--------|------------|--------|--------|------------------|
|                             | Yes(PP P)           | No(P,P C,PR) | Total  |            | Lower  | Upper  |                  |
|                             | n = 7               | n = 81       | n = 88 |            |        |        |                  |
| <b>Age (year)</b>           |                     |              |        |            |        |        |                  |
| < 30                        | 3 (23.1)            | 10           | 13     | 5.32       | 0.79   | 35.04  | 0.06             |
| 31 – 40                     | 4 (9.3)             | 39           | 43     | 1.44       | 0.25   | 8.75   | 0.71             |
| 41 – 50                     | 0 (0)               | 28           | 28     | 0.00       | 0.00   | 1.62   | 0.09             |
| 51 – 65                     | 0 (0)               | 2            | 2      | 0.00       | 0.00   | 57.23  | 1.00             |
| > 65                        | 0 (0)               | 2            | 2      | 0.00       | 0.00   | 57.23  | 1.00             |
| <b>Sex</b>                  |                     |              |        |            |        |        |                  |
| Male                        | 7 (9.3)             | 68           | 75     | -          | -      | -      | 0.59             |
| Female                      | 0 (0)               | 13           | 13     | 0.00       | 0.00   | 4.74   |                  |
| <b>Marital status</b>       |                     |              |        |            |        |        |                  |
| Single                      | 0 (0)               | 17           | 17     | 0.00       | 0.00   | 3.32   | 0.34             |
| Married                     | 7 (10.6)            | 59           | 66     | -          | -      | -      | 0.19             |
| Separated/Divorced          | 0 (0)               | 2            | 2      | 0.00       | 0.00   | 57.23  | 1.00             |
| Widowed                     | 0 (0)               | 3            | 3      | 0.00       | 0.00   | 31.90  | 1.00             |
| <b>Geo-political origin</b> |                     |              |        |            |        |        |                  |
| North Central               | 0 (0)               | 3            | 3      | 0.00       | 0.00   | 31.90  | 1.00             |
| North East                  | 0 (0)               | 2            | 2      | 0.00       | 0.00   | 57.23  | 1.00             |
| South East                  | 0 (0)               | 14           | 14     | 0.00       | 0.00   | 4.3    | 0.59             |
| South West                  | 7 (10.6)            | 59           | 66     | -          | -      | -      | 0.19             |
| South South                 | 0 (0)               | 3            | 3      | 0.00       | 0.00   | 31.90  | 1.00             |
| <b>Religion</b>             |                     |              |        |            |        |        |                  |
| Christianity                | 6 (7.6)             | 73           | 79     | 0.66       | 0.06   | 16.33  | 0.54             |
| Islam                       | 1 (16.7)            | 5            | 6      | 2.53       | 0.00   | 30.75  | 0.40             |
| Traditional                 | 0 (0)               | 1            | 1      | 0.00       | 0.00   | 229.41 | 1.00             |
| Others                      | 0 (0)               | 2            | 2      | 0.00       | 0.00   | 57.23  | 1.00             |
| <b>Household size</b>       |                     |              |        |            |        |        |                  |
| ≤ 5                         | 7 (11.3)            | 55           | 62     | -          | -      | -      | 0.10             |
| 6 – 10                      | 0 (0)               | 24           | 24     | 0.00       | 0.00   | 2.05   | 0.18             |
| ≥ 11                        | 0 (0)               | 2            | 2      | 0.00       | 0.00   | 57.23  | 1.00             |

\*Significant

(KEY:p-public, pc-public corporate, pr-public private)

However, from table 8.31A, there is significant association between property price (cost of house) and estate typology. The categories of N5.1million –N10million and N15million (and above) are significant in association to housing typology. This explains Households disparate income levels in table 8.29, and confirms the existence of multiple sources of income for households. It is from the possibilities of such sources of income that household's housing aspirations originate and ultimately influences their preferred choice of estate typology and cost irrespective of institutional arrangements for financing. Households and actors/partners of PPP often succeed in their finance arrangements independent of existing institutional frameworks.

Therefore, the significance of access to financing is not in the modern mortgage direction rather, households and actors/partners achieve their housing aspirations and objectives by exploring other avenues to tackling financing of housing. This research intends to explore this dimension to create subsets of enterprise that policy framework should support to boost the enabling environment of the public sector for the private sector to fully utilize the potentials of PPP.

**Table 8.31A : Associations between other variables and estate typology**

| Variable                                | Public-Private Typology (%) |        |        | Odd ratio | 95% CI |        | Fisher's exact p |
|---|-----------------------------|--------|--------|-----------|--------|--------|------------------|
|   | Yes                         | No     | Total  |           | Lower  | Upper  |                  |
|   | n = 7                       | n = 81 | n = 88 |           |        |        |                  |
| <b>Housing tenure</b>                   |                             |        |        |           |        |        |                  |
| Ownership with government title         | 0 (0)                       | 1      | 1      | 0.00      | 0.00   | 229.41 | 1.00             |
| Ownership with allocation letter        | 7 (25.0)                    | 21     | 28     | -         | -      | -      | 0.00*            |
| Ownership without title                 | 0 (0)                       | 2      | 2      | 0.00      | 0.00   | 57.23  | 1.00             |
| Rental                                  | 0 (0)                       | 53     | 53     | 0.00*     | 0.00   | 0.45   | 0.001*           |
| Squatter                                | 0 (0)                       | 4      | 4      | 0.00      | 0.00   | 21.70  | 1.00             |
| <b>Dependant category</b>               |                             |        |        |           |        |        |                  |
| Nuclear family                          | 4 (6.1)                     | 62     | 66     | 0.41      | 0.07   | 2.57   | 0.36             |
| Extended family                         | 1 (7.7)                     | 12     | 13     | 0.96      | -      | -      | 1.00             |
| Friends                                 | 1 (25.0)                    | 3      | 4      | 4.33      | 0.00   | 63.64  | 0.29             |
| Domestic staff                          | 1 (20.0)                    | 4      | 5      | 3.21      | 0.00   | 41.39  | 0.35             |
| <b>Duration of stay in Lagos (year)</b> |                             |        |        |           |        |        |                  |
| ≤ 5 years                               | 0 (0)                       | 5      | 5      | 0.00      | 0.00   | 16.21  | 1.00             |
| 6 – 10 years                            | 0 (0)                       | 6      | 6      | 0.00      | 0.00   | 12.80  | 1.00             |
| ≥ 11 years                              | 7 (9.1)                     | 70     | 77     | -         | -      | -      | 0.59             |
| <b>Access to house</b>                  |                             |        |        |           |        |        |                  |
| Cash payment/s                          | 7 (9.5)                     | 67     | 74     | -         | -      | -      | 0.59             |
| Loan mortgage banks                     | 0 (0)                       | 1      | 1      | 0.00      | 0.00   | 229.41 | 1.00             |
| Cash payment/s + Loan mortgage          | 0 (0)                       | 1      | 1      | 0.00      | 0.00   | 229.41 | 1.00             |
| Others                                  | 0 (0)                       | 12     | 12     | 0.00      | 0.00   | 0.96   | 1.00             |
| <b>Cost of house (₦)</b>                |                             |        |        |           |        |        |                  |
| ≤ 5 million                             | 0 (0)                       | 53     | 53     | 0.00*     | 0.00   | 0.45   | 0.001*           |
| 5.1 – 10 million                        | 0 (0)                       | 20     | 20     |           |        |        |                  |
| 10.1 – 15 million                       | 0 (0)                       | 4      | 4      | 0.00      | 0.00   | 21.70  | 1.00             |
| ≥ 15.1 million                          | 7 (63.6)                    | 4      | 11     | -         | -      | -      | 0.00*            |
| <b>Preferred size of estate</b>         |                             |        |        |           |        |        |                  |
| ≤ 25 households                         | 0 (0)                       | 7      | 7      | 0.00      | 0.00   | 10.50  | 1.00             |
| 26 - 50 households                      | 6 (13.3)                    | 39     | 45     | 6.46      | 0.71   | 146.94 | 0.11             |
| 51 - 100 households                     | 1 (4.5)                     | 21     | 22     | 0.48      | 0.02   | 4.45   | 0.68             |
| 101 - 200 households                    | 0 (0)                       | 9      | 9      | 0.00      | 0.00   | 7.61   | 1.00             |
| > 200 households                        | 0 (0)                       | 5      | 5      | 0.00      | 0.00   | 16.2   | 1.00             |

\*Significant

More so, from table 8.31B, the association between PPP estate typology and infrastructure provision is significant. Households tend to insist on the provision of these amenities where it is a PPP estate as against their acceptance of its absence when it is a public estate. There is a higher-level of standard demanded from PPP estates among households. This explains the improved housing environment, which PPP brings to bear on housing development.

**Table 8.31B:** Associations between provision of infrastructure in the estate and estate typology

| Variable  | Public-Private Typology (%) |              |                 | Odds ratio              | 95% CI |       |
|---|-----------------------------|--------------|-----------------|-------------------------|--------|-------|
|   | Yes<br>n = 7                | No<br>n = 13 | Total<br>n = 20 |                         | Lower  | Upper |
| <b>Provision of infrastructure in the estate</b>                |                             |              |                 |                         |        |       |
| <b>Access road provided by developer</b>                        |                             |              |                 |                         |        |       |
| Yes   | 7 (38.9)                    | 11 (61.1)    | 18              | Fisher's exact p = 0.52 |        |       |
| No  | 0 (0)                       | 2 (100)      | 2               | 0.00                    | 0.00   | 8.77  |
| <b>Estate road network provided by developer</b>                |                             |              |                 |                         |        |       |
| Yes   | 7 (35.0)                    | 13 (65.0)    | 20              |                         |        |       |
| No  | 0                           | 0            | 0               |                         |        |       |
| <b>Storm water drainage provided by developer</b>               |                             |              |                 |                         |        |       |
| Yes   | 6 (33.3)                    | 12 (66.7)    | 18              | 0.50                    | 0.01   | 22.68 |
| No  | 1 (50.0)                    | 1 (50.0)     | 2               | 2.00                    | 0.00   | 92.3  |
| <b>Electricity (PHCN) supply provided by developer</b>          |                             |              |                 |                         |        |       |
| Yes   | 7 (36.8)                    | 12 (63.4)    | 19              | Fisher's exact p = 1.00 |        |       |
| No  | 0 (0)                       | 1 (100)      | 1               | 0.00                    | 0.00   | 36.58 |
| <b>Sewage collection/disposal by developer</b>                  |                             |              |                 |                         |        |       |
| Yes   | 7 (36.8)                    | 12 (63.4)    | 19              | Fisher's exact p = 1.00 |        |       |
| No  | 0 (0)                       | 1 (100)      | 1               | 0.00                    | 0.00   | 36.58 |
| <b>Pipe borne water supply provided by developer</b>            |                             |              |                 |                         |        |       |
| Yes   | 7 (35.0)                    | 13 (65.0)    | 20              |                         |        |       |
| No  | 0                           | 0            | 0               |                         |        |       |
| <b>Solid waste collection/disposal provided by developer</b>    |                             |              |                 |                         |        |       |
| Yes   | 7(36.9)                     | 11 (61.1)    | 18              | Fisher's exact p = 1.00 |        |       |
| No  | 0 (0)                       | 2 (100)      | 2               | 0.00                    | 0.00   | 8.77  |
| <b>Developers Access to land</b>                                |                             |              |                 |                         |        |       |
| Subsidized land by government allocation below 50% market value | 5 (45.5)                    | 6 (54.5)     | 11              | 0.83                    | 0.13   | 5.39  |
| Subsidized land by government allocation above 50% market value | 0 (0)                       | 1 (100)      | 1               | 0.00                    | 0.00   | 36.58 |
| Unsubsidized land at market value                               | 0 (0)                       | 2 (100)      | 2               | 0.00                    | 0.00   | 8.77  |
| Free land by government allocation                              | 2 (33.3)                    | 4 (66.7)     | 6               | 0.90                    | 0.09   | 9.90  |

(\*significant)



**8.3.3 Hypothesis Three:** Differences in housing delivery systems of actors/partners arrangements such as tenure, government policy, and factors of land value are not the determinants of design/layout-Typology.

Table 8.32 shows the duality in ROI among housing development actors/partners perception of value. Both the 10% and below ROI and 51% and above ROI were significant among respondents. This explains the high and low-end of the housing markets as earlier discussed in the case study. However, the PPP policy framework has failed to capture these two markets; as it stands government concentrates only on the high end of the market. There is need to determine profitability in terms of value in relation to the point of application of PPP to improve the outcomes.

**Table 8.32:** Associations between choices of estate location, value of local currency on estate development and estate typology.

| Variable   | Public-Private Typology (%) |              |                 | Odd ratio               | 95% CI |       |
|--|-----------------------------|--------------|-----------------|-------------------------|--------|-------|
|  | Yes<br>n = 7                | No<br>n = 13 | Total<br>n = 20 |                         | Lower  | Upper |
| <b>Choice of estate location was influenced by need to achieve (ROI)</b> |                             |              |                 |                         |        |       |
| Yes (10% and below ROI)  | 0(0)                        | 1(100)       | 1               | 0.00                    | 0.00   | 36.58 |
| Yes (11 – 30% ROI)   | 5 (41.7)                    | 7 (58.3)     | 12              | 2.14                    | 0.21   | 24.44 |
| Yes (31 – 50% ROI)   | 1 (25.0)                    | 3 (75.0)     | 4               | 0.56                    | 0.02   | 9.19  |
| Yes (51% ROI and above)  | 1 (50.0)                    | 1 (50.0)     | 2               | 2.00                    | 0.00   | 92.3  |
| No   | 0(0)                        | 1(100)       | 1               | 0.00                    | 0.00   | 36.58 |
| <b>Value of local currency on estate development</b>                     |                             |              |                 |                         |        |       |
| Yes  | 4 (28.6)                    | 10 (71.4)    | 14              | 0.40                    | 0.03   | 4.16  |
| No   | 3 (50.0)                    | 3 (50.0)     | 6               | 2.50                    | 0.24   | 28.86 |
| <b>Sources of funding</b>  |                             |              |                 |                         |        |       |
| NHF contribution-FMBN funding system                                     | 1 (33.3)                    | 2 (66.7)     | 3               | 0.92                    | 0.00   | 18.53 |
| Commercial loan system   | 0 (0)                       | 1 (100)      | 3               | 0.00                    | 0.00   | 36.58 |
| Privately sourced local funds (non-financial institutions)               | 0 (0)                       | 1 (100)      | 3               | 0.00                    | 0.00   | 36.58 |
| Combination of any two or more sources                                   | 6 (40.0)                    | 9 (60.0)     | 15              | 2.67                    | 0.18   | 80.10 |
| <b>Developers profit motive</b>  |                             |              |                 |                         |        |       |
| Not important at all   | 0 (0)                       | 2 (100)      | 2               | 0.00                    | 0.00   | 8.77  |
| Fairly important   | 1 (16.7)                    | 5 (83.3)     | 6               | 0.27                    | 0.00   | 3.81  |
| Neutral  | 1 (100)                     | 0 (0)        | 1               | Fisher's exact p = 0.35 |        |       |
| Important  | 3 (50.0)                    | 3 (50.0)     | 6               | 2.50                    | 0.24   | 28.86 |
| Very important   | 2 (40.0)                    | 3 (60.0)     | 5               | 1.33                    | 0.11   | 16.33 |
| <b>Developers' opinion of construction cost</b>                          |                             |              |                 |                         |        |       |
| Fairly high  | 1 (12.5)                    | 7 (87.5)     | 8               | 0.14                    | 0.00   | 1.98  |
| Very high  | 5 (50.0)                    | 5 (50.0)     | 10              | 4.00                    | 0.40   | 48.07 |
| Too high   | 1 (50.0)                    | 1 (50.0)     | 2               | 2.00                    | 0.00   | 92.30 |

The odd ratio value indicates significance for actors/partners (developers profit motive in table 8.32) and the Fisher's exact p=0.00. This explains the flexibility in profit motive by

actors/partners choice of ‘not important at all’. By exploring this window, PPP arrangements are less likely to be too profit oriented.

Similarly, there is observed duality of significance in actors/partners opinion of development cost (developers’ opinion of construction cost). On the one part, it was significant for choices of ‘fairly high’ and on the other for choices of ‘too high’. These extremities when matched with that of duality of ROI, the significance of their sources of capital (commercial loan and private sources may be attributed to the duality).

However, it is evident that actors/partners willingness to obtain value is independent of the institutional framework. Based on this premise, PPP actors/partners tend to derive maximum value from design/layout-typology to augment the shortfall in ROI and pricing benchmark set by the government (public) partner.

It is conclusive that the null hypothesis is rejected and the alternate hypothesis accepted that actors/partners arrangements determine the housing design/layout-typology.

**8.3.4 Hypothesis Four:** Changes in future levels of actors/partners commitment cannot predict changes in levels of building activity regulations and design/layout-Typology.

From table 8.33, it is evident that the future levels of actors/partners commitment can be used to predict changes in the level of building activity regulations since there is a strong positive significance in associations with PPP estate typology.

Therefore, the null hypothesis ( $H_0$ ) is rejected. The alternative Hypothesis ( $H_1$ ) is accepted; that the ease with which actors/partners perceive building activity regulations and design/layout typology has a corresponding positive influence on their commitment. This can form the basis for predicting future levels of actors/partners commitment.

More so, from table 8.33 it is evident that, housing development actors/partners are not likely to fulfill government policy criteria to achieve their housing objectives. In addition, the use of high technology is desirable but not accessible and does not discourage their desire to achieve their housing objectives.

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**Table 8.33:** Associations between respondent's commitment to estate development and estate typology

| Variable   | Public-Private Typology (%) |           |        | Odd ratio               | 95% CI |        |
|--|-----------------------------|-----------|--------|-------------------------|--------|--------|
|  | Yes                         | No        | Total  |                         | Lower  | Upper  |
|  | n = 7                       | n = 13    | n = 20 |                         |        |        |
| <b>Respondent's commitment to estate development</b>                           |                             |           |        |                         |        |        |
| <b>Strict use of registered professionals always payment of full fees</b>      |                             |           |        |                         |        |        |
| Yes  | 7 (43.8)                    | 9 (56.3)  | 16     | Fisher's exact p = 0.25 |        |        |
| No   | 0 (0)                       | 4 (100)   | 4      | 0.00                    | 0.00   | 2.90   |
| <b>Strict use of certified contracting firms</b>                               |                             |           |        |                         |        |        |
| Yes  | 7 (43.8)                    | 9 (56.3)  | 16     | Fisher's exact p = 0.25 |        |        |
| No   | 0 (0)                       | 4 (100)   | 4      | 0.00                    | 0.00   | 2.90   |
| <b>Strict use of building regulation guidelines</b>                            |                             |           |        |                         |        |        |
| Yes  | 7 (38.9)                    | 11 (61.1) | 18     | Fisher's exact p = 0.52 |        |        |
| No   | 0 (0)                       | 2 (100)   | 2      | 0.00                    | 0.00   | 8.77   |
| <b>Strict use of value added technology</b>                                    |                             |           |        |                         |        |        |
| Yes  | 7 (46.7)                    | 8 (53.3)  | 15     | Fisher's exact p = 0.11 |        |        |
| No   | 0 (0)                       | 5 (100)   | 5      | 0.00                    | 0.00   | 1.99   |
| <b>Continuous use of research to improve outcome</b>                           |                             |           |        |                         |        |        |
| Yes  | 7 (46.7)                    | 8 (53.3)  | 15     | Fisher's exact p = 0.11 |        |        |
| No   | 0 (0)                       | 5 (100)   | 5      | 0.00                    | 0.00   | 1.99   |
| <b>Strict use of SON certified building materials</b>                          |                             |           |        |                         |        |        |
| Yes  | 7 (46.7)                    | 8 (53.3)  | 15     | Fisher's exact p = 0.11 |        |        |
| No   | 0 (0)                       | 5 (100)   | 5      | 0.00                    | 0.00   | 1.99   |
| <b>Level of technology utilized</b>  |                             |           |        |                         |        |        |
| Manual   | 1 (16.7)                    | 5 (83.3)  | 6      | 0.27                    | 0.01   | 3.81   |
| Intermediate   | 4 (50.0)                    | 4 (50.0)  | 8      | 3.00                    | 0.32   | 32.17  |
| High   | 1 (50.0)                    | 1 (50.0)  | 2      | 2.00                    | 0.00   | 92.30  |
| Combination any 2 or more  | 1 (25.0)                    | 3 (75.0)  | 4      | 0.56                    | 0.02   | 9.19   |
| <b>Fulfillment of government policy applicable to criteria for development</b> |                             |           |        |                         |        |        |
| Not applicable   | 0 (0)                       | 1 (100)   | 1      | 0.00                    | 0.00   | 36.58  |
| Applicable   | 3 (27.3)                    | 8 (72.7)  | 11     | 0.47                    | 0.05   | 4.27   |
| Strongly applicable  | 0 (0)                       | 2 (100)   | 2      | 0.00                    | 0.00   | 8.77   |
| Neutral  | 4 (66.7)                    | 2 (33.3)  | 6      | 7.33                    | 0.62   | 116.05 |

However, the use of professionals (experts), the use of contracting firms and the pursuit of value added techniques and improvement in use of technology is significant based on the odd ratio values indicated in table 8.33. It is evident that actors/partners are willing to explore these possibilities and improve on them; provided an enabling environment from government guarantees their huge investments; and this explains the commitment from PPP actors/partners.

Therefore, by harnessing actors/partners commitment through enabling them to circumvent existing 32-stage building regulatory and land-use policy framework, there is likely increase in their commitment to housing development.

#### **8.4 Model Validation for instruments used in Determining HDS, PPP and AHD.**

In the development of this study, the factors thought to be the major determinants of HDS, PPP, and AHD were validated using field survey data and corresponding data from National Bureau of Statistics (NBS). The validation of instruments gives a baseline for the analytical process. However, this research relies on its literature and several observed priori plausibility for all four hypotheses.

For instance, from previous studies, property price can be used to predict future levels of housing demand and the levels of housing demand, size of population and national income can be used to predict future levels of housing supply (Windapo, 2005, Kemmeny, 1992, 1998).

The corollary to the above priori plausibility is that, changes in partners' commitment (by the public sector/government policy granting incentives to the private sector) are likely to predict future levels of building activity regulation and design-layout/typology in relation to housing delivery systems.

From literature and data, this research demonstrated that one of such incentive is a direct PPP platform, which circumvents disparate sources of building activity regulations. The indicators include, observed data and current land-use concepts. This shows that the study data supports a duality in the design approach to HDS; which are design intentions and realities of spatial use (Aradeon, 1980). Unfortunately, this is in contravention of land-use and building regulatory framework.

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## **8.5 Findings, Discussions and comparative analysis with previous research studies**

The data obtained from respondents and the analysis of this data and their corresponding outcome are discussed below:

### **8.5.1 Determinants of HDS, PPP and AHD**

The key indicators in this research thought to be the determinants of HDS, PPP, and AHD are:

Firstly, the emerging factors that are determinants of HDS, are theoretically categorized into two; namely Resource Elements and the Process elements.

The Resource elements are tenure, access to Finance, access to occupancy, government policy, household income, housing typology (layout/design), and household size.

The Process Elements are levels of building activity regulation, infrastructure provision, management/maintenance, and construction cost.

Secondly, the factors that are determinants of PPP are theoretically categorized into two; namely Resource elements and Process elements.

The Resource elements are, Tenure, government policy, location, commitment, access to land access to finance.

The Process Elements are, profit motive, interest rate, property price, cost of foreign exchange, infrastructure provision and construction cost.

Thirdly, the four categorical determinants of AHD namely:

1. The house unit (household size, design typology)
2. The housing setting (layout typology, Housing environment, lifestyle)
3. The housing Production (estate size, construction technology, construction cost)
4. The housing process (levels of building activity regulation, infrastructure provision, levels of actors/partners commitment).

This study shows that there is a critical point in the housing process from which PPP is applicable. It is at this threshold that PPP's evaluation for provision of adequate housing is appropriate. However, the government element, which is 'public', is the needed catalyst to initiate any PPP. This is against the backdrop that government policy is target housing and consequently the house unit becomes a source of design within an established cost and environment stipulated by the housing policy. It is imperative that the outcome would be less

responsive to the aspirations of households and housing development actors/partners. This study established through several literatures and its quantitative and qualitative analysis that there is need to unbundle ‘enabling environment’ for private sector involvement as a critical success factor for PPP’s. This is based on the hypothesis that PPP is fundamentally a union of integrated involvements of stakeholders in institutions and organizations with the potential for contribution towards achieving AHD among plethora of HDS in Lagos.

The main process of arriving at this critical threshold from this study is to ‘optimize’ three components; resource, process, and social context for the planned housing programme. In order to capture the essence of these three components of housing for optimization, four quadrants are used to integrate the involvements of stakeholders, their institutions, and organizations. Figure 8.9 is an integration of concepts drawn from figures 3.7, 5.1, 6.2, 8.7 and 8.8. The embodiment of figure 8.9 posits that AET is only applicable within a narrow region controlled by stakeholders. The control element of this region is in order of substantial hierarchy among housing development actors/partners, experts and households. Therefore, AET assessors get to decide the order of hierarchy of influences or involvement of stakeholders. The limitation of controls is relative to the knowledge base of stakeholders at the institutional and organizational levels if delineated.

Therefore, increases in P-value of private sector beyond absolute zero is a PPP strategic strength which makes the private sector yield to public sector(not –for-profit) influence. While, the alternate to this is that decrease in P-value of Public sector below absolute zero is a PPP strategic weakness, which makes the public sector yield to private sector (for-profit) influence. Both tendencies contain regions (compositions of determinants/elements/components) that are in divergence to private or public influences and expressed mathematically as:

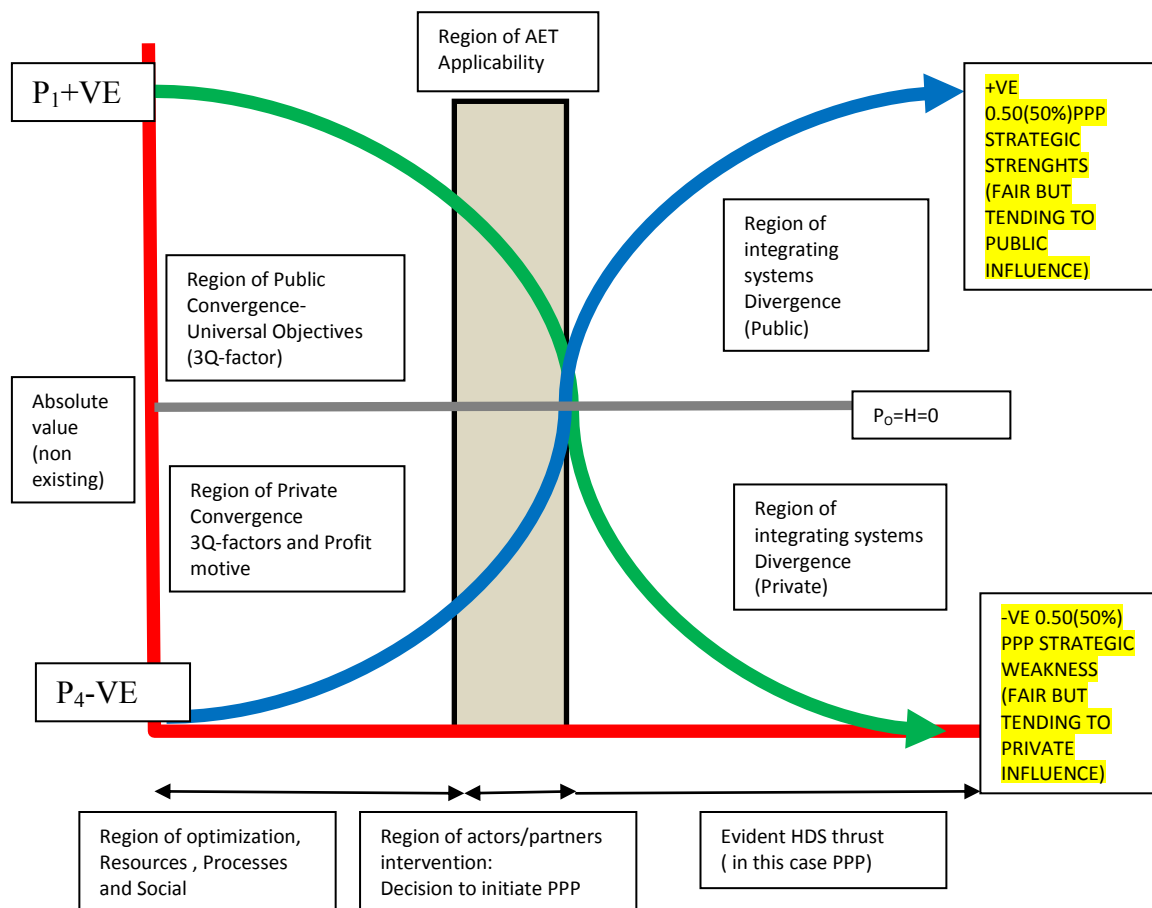
$H = \sum_{i=1}^{LNM} (P + T + A)_i$ , where H is the HDS, P is the PPP, T is the housing typology and A is the AHD. The elements or subsystems of P is L, and T is M and A is N all within an interval of  $0 \leq [\sum_{i=1}^{LNM} (P + T + A)_i] \leq 1$  as expressed qualitatively in figure 8.7.

To arrive at the region of applicability of AET, a key assumption is made that all elements of HDS converges based on the 3-Qfactor, otherwise known as the universal objectives of HDS. This assumption is fundamental to the entire approach for determination of an HDS thrust.

This approach applies the strengths and weaknesses of both the convergence and divergence theories of HDS into an integral evaluation technique for the housing lifecycle. In order to test

this approach, this study relied on a delineation of HDS typologies from Lagos, and stakeholders' delineation.

**Figure 8.9** PPP point of application in housing development programmes.



Therefore, from figure 8.6, 8.7 and 8.8 to achieve AHD, the P-value is greater than 0.25 but equal to or less than 0.5 and a 'fair HDS' for all three types of stakeholders in PPP. This qualitative expression corresponds to the quantitative value derived from the deduced mathematical equation.

It is important to note that current PPP attempts at developing housing programmes limit themselves to public sector providing the land and the private sector sourcing funding and determining the housing type without actually considering the three elements of optimization that is contextual to the three types of stakeholders. By using, the three stage Adequacy Evaluation Technique (AET) PPP's improve their contributions towards attaining adequacy for stakeholders within social and environmental contexts.

This supports the theoretical paradigm shift in the architectural design attitudes from tradition to colonialism, syncretism, and now functional-syncretism with minimalist content as the

common denominator to the design transitions of Lagos. The minimalist content corresponds to 'fair HDS' with a P-value  $>0.25$  but  $\leq 0.5$  often described as realities of design intention (Aradeon,1980). The plausibility of architectural designs for housing in Lagos moving away drastically from this theory is narrow;except changes occur among the determinants that would create a difference in the integrating elements discussed as determinants of HDS.

The analysis of the data of the study, determinants of HDS, PPP, and AHD, which corroborates the above indicators, are discussed below.

**8.5.1.1Tenure:** The research showed that for most households' in Lagos, tenure was rental. This is supported by baseline data from NBS(2009) and FOS(2004) as well as other research findings on Lagos (Onibokun,1975,1974;Awotono,1988;Abiodun,1980).It also indicated that owner-occupiers are more likely to dwell in PPP housing estates. The study revealed a significant association between ownership tenure and duration of stay in Lagos; which indicated that the longer you stay in Lagos upwards of eleven years, the more likely you are able to own a typology of housing. This indicates that ownership of housing was not necessarily a priority for new entrants into Lagos. The floating population requires between 5-10years to decide if they would stay in Lagos; hence, their HDS should be in relation to rental tenure.

Therefore, the implication is that increasing the rental tenure by design is a priority for housing policy of Lagos. Unfortunately, the predominance of rental as shown from previous studies is that about 76.2% of housing in Lagos is rental and rooming apartment (NBS, 2009; Smith 1976; FOS, 2004). The findings in this study show that 31.8% were owner-occupiers with letter of allocation, 1.1% was owner-occupiers with government title (certificate of occupancy), and 60.2% from this study was rental tenure. Rental tenure remains high in Lagos but the housing typology in this case is majorly rooming which accounts for about 70% of the house types (FOS, 2004).

This provision of rooming housing typology does not cater for the housing aspirations of the middle-income group that this study embarked upon. However, by middle-income definition of NBS, most households fall within this bracket of rooming housing. Translating or extending existing tenure from rental into ownership and reviewing land-use concept to increase density should be a subject of interest given the above situation.



The issues around re-ordering the tenets of tenure legislation and rights as well as increasing budgetary allocation to housing and still neglecting to solve this design theory framework is likely to yield very little result. This research reveals that the design theory in relation to institutional arrangements requires a fundamental review in its extension of existing ownership tenure arrangements to accommodate rental tenure and transitional tenure. This flexibility bases a new design theory that would create the needed template for stakeholders' arrangements. Lagos essentially has no legislation, which supports any other type of tenure arrangement apart from ownership and rental; given the rich historical background of communal co-existence that remains unexploited.

**8.5.1.2 Access to Finance:** The study revealed that there is evident cumbersomeness in accessing finance for households and housing development actors/partners.

A survey of access to mortgage in western Nigeria (Ojo,2004) indicates a ranking of lenders requirements. Top most was provision of collateral by mortgagee at 85.6% and their affordability as second at 68.2%. At a target-cost of N5million (five million naira approximately \$34,000=00USDollars) for single-family house, middle-income households find it affordable (with multiple sources of income as observed from this study). Unfortunately, they are unable to fulfill the requirements for accessing this finance due to criteria's such as, providing certificate of occupancy as security for the loan, monthly repayment attached to steady employment and age, etc as cited earlier in this work. This study (ibid) found out that 83.7% of all households surveyed paid cash for their housing.

There is a disconnection between the fund, the framework for disbursement, and the actual housing product. The value mechanism is in relation to the cumbersomeness encountered to deliver the housing (Olayiwola, et.al, 2005). Housing development actors/partners' factors this into their ROI and transfers the cost to households. Ojo 2004; 2007) identified cumbersomeness of lender requirements and factors affecting real estate financing in southwest Nigeria. Access to finance is therefore important to both the householder and the actors/partners in the HDS of Lagos.

In this research, most households among the middle-income group augmented their housing finance from other sources that did not fit their income profile. Most respondents paid cash for both purchase and construction of their homes. One hundred percent of owner-occupiers in PPP estates surveyed paid cash, while less than 30% obtained mortgages in Public estates and private estates. Two concessionary windows through mortgage lending and the capital market

are currently under implementation (Mabogunje, 2007). These windows of funding are to improve lending and increase funding. Unfortunately, the direct disbursement of funds to households and housing development actors/partners would not reduce the institutional bottlenecks associated with access to finance for both categories of beneficiaries.

Although, the PPP framework in this study was in relation to AHD and HDS, by so considered finance as the dependent variable to the determining elements of AHD and succinctly HDS. This is based on changes in the determining elements of AHD that would initiate the financing arrangement for households and housing development actors/partners. It is against this backdrop that the key components of housing cost are reduced through optimization of resources for both the household and the housing development actors/partners.

This concept reinforces the tangibility of the items for optimization (resources, processes, and social context) as discussed in this work. The stages of financing and the requirements for financing when optimized in relation to the household and the housing development actor/partner produces phenomenal results as a cost outcome in the housing process.

To demonstrate it, this research turned to its proposition for a partnership framework that allows for exchange of services with implicit value as against real cash transaction. This thesis therefore proposes more exchange-based transaction in HDS through PPP framework rather than contract based and cash backed transactions as it currently occurs.

There is a need to rethink the theory of financing households and stakeholders in general. Providing housing finance for contract based or self-help construction has failed in Nigeria in the last fifty years. The population, size of demand, limitations inherent in the construction industry and national/regional logistic issues in relation to building materials sourcing, distribution and inflation, are among the hurdles direct financing is unable to overcome from this study.

More importantly was the issue of multiple-home-ownership (MHO), which is traditional to heads of households as they attain their elite status within the national three-tier fabric of relevance communally. So far, there is no policy (in Lagos or elsewhere in the country), that dissuades heads of households from multiple-home-ownership as suggested in this study. Therefore, disrupting institutional financing to meet the housing demands of households seeking MHO is plausible at all levels of existing policy framework.

However, by extending PPP framework to accommodate elements relevant to exchange-based transactions in housing and the creation of incentives through PPP subsidies for specific home ownership items may reduce the vested interest by speculators; besides the provision of land and financing alone.

**8.5.1.3 Access to occupancy:** The study showed that households in PPP estates and private housing estates had no problem securing their housing directly from housing development actors/partners. The aim of PPP is an avenue for government to create enabling environment for housing development actors/partners.

Studies show that ‘flexibility’ is fundamental to access and critical to housing provision for the disadvantaged (Hamdi, 1995). From the four-housing estate typologies studied, the occupancy framework is not flexible and this hampers housing mobility; 60.2% of household respondents had rental tenure while 35.2% had ownership tenure. In the entire policy framework, the ownership tenure is the pivot for access to occupancy and not rental. There is a need for policy review in this direction. Currently, there are selective legislations, which support rent control, and this has proved ineffective in the last thirty-years of its introduction and reviews in Lagos.

More so, the criteria for eligibility of households to access housing are income, employment, and age matched against housing typology at a predetermined cost (Mabogunje, 2007). These elucidate other problems associated to access to occupancy in the housing process. This study shows that, 17% of household respondents relied on monthly salary and 52.3% have multiple sources of income/earning including salary to finance their housing. This was broken into 47.7% of respondents that declared a monthly income of between N76,000 to N150,000 which is well above the policy basis from which the eligibility criteria that grants access to housing occupancy was developed (which is N40,000 income per month as stated in section one of this work).

In addition, 48.9% of households occupying the housing estates surveyed were within age’s 31-40years; yet this accounted for 35.2% of owner –occupiers. One hundred percent of the housing in the estates surveyed (Public and public-corporate, for which government policy defined eligibility criteria for access to occupancy) was fully paid for by households, yet it is evident from the study that speculators were the predominant buyers who could afford to rent out their units to tenants. Eligibility criteria thought to be the basis for housing policy reform failed to achieve planned objectives.

In this research development, household's access to housing correlates to the duration of their stay in Lagos. 87.5% of household respondents in Public and public-private estates had stayed in Lagos for 11 years before access to occupancy by ownership tenure. This shows that access to occupancy is associated to housing estate typology. More so, households that opted for private and PPP housing estates were predominantly multiple homeowners and not first time homeowners.

By housing policies defining the household size, design typology and target cost it sets the stage for complex arrangements among stakeholders. However, this study unbundled PPP-stakeholders' into three main types namely, the household, the housing development actor/partner, and housing development experts. Unfortunately, the intricacies involved with this tripartite association are not addressed by the National housing policy. The failure of policies to achieve planned objective in terms of beneficiaries of housing is dependent on the outcomes of this tripartite association at the institutional and organizational levels of society.

Studies show that, the intent of the policy was to reduce the risk of 'inaccessibility to housing by households' through target housing (Mabogunje, 2007). This means that access to housing is 'household criteria driven'. In a heterogeneous society as Lagos, with a strong historic antecedent of disparate influences and other peculiar problems enumerated in the literature, such basis for households to access housing is ineffective.

Certain process costs are prohibitive to occupancy. A 32-stage process to sourcing land and obtaining development rights in Lagos has been identified (Egbu, Olomolaiye, Gameson, 2008). This study also found out that the process costs associated with access to occupancy and the cumbersomeness in obtaining housing were strongly related. From the field study, the data obtained showed that 70.5% considered access to occupancy as very cumbersome.

PPP can therefore close the gap between the 'haves' and the 'have not' through a process of direct assessment of the household to qualify for the level of housing which optimized resources can afford. By this, improve the context of policy-based target housing through various PPP adaptations. This includes packaging housing for both rental and ownership tenures separately, government based rent to own housing, private sector rent-to-own housing rent-to-own based on grow-to-change housing typology.

This research based its inferences on the fact that only PPP arrangements can create the needed platform for such flexibility in terms of reducing the cumbersomeness associated with access

to occupancy. As this would make more housing types and options available, payment options and the needed ambience for housing mobility and by so discourage speculators and core profiteers who intend to accumulate surplus value at the expense of equity and justice. This research does not think that this direction through PPP would destroy commercial housing and the private sector profit driven enterprise, rather it would create the needed platform for households to enter into housing considered to be the most important single-family investment and enhance the productive capacity of household's concurrently.

**8.5.1.4 Government policy:** This study identified that rental housing in Lagos does not meet design/lifestyle requirements of middle-income group. Rental housing in Lagos is rooming with shared/common services makes up 76.2% of housing stock (FOS, 2004; NBS, 2009). From the pre-colonial era until date, it is evident that rental tenure is not part of government policy and not a direct formal private sector initiative.

Unfortunately, the PPP policy framework is ownership tenure based; and rental is a secondary arrangement between beneficiaries of PPP housing and other households who have no access to occupancy.

The research study shows that government policy focuses on the housing process in terms of production rather than creating enabling environments. However, the data analyzed showed that 69.3% considered government (public sector) involvement in home ownership very applicable to their experience and 70.5% expressed this experience as cumbersome. The inability of government to remove the constraints in the housing process is traceable to the failure of policies, to address the realities of households and housing development actors/partners.

From previous studies government policy set out the framework for public housing with a neglect of private housing; 10-contributing factors were discussed in the literature (Awotono, 1990). This is against the backdrop that, the private sector is responsible for providing 90% of housing stock in Nigeria (Olutuah, 2005; NBS, 2009). Although, PPP framework now recognizes the private sector partner (FGN, 2008); even then, homeownership is realizable by the upper 5% in Lagos (UNCHS, 1993).

Findings from this study indicate that current occupancy tenure of public estates was rental (76%), while 80% of PPP estates were owner-occupied. The effect of government policy

would be far reaching on its programmes in the translation of housing aspiration into effective demand if institutional shifts in policy were in tandem with the realities of social arrangements among households and housing development actors/partners. It is evident from the study that a PPP housing estate limits considerably the speculative approach to housing and the use of housing to accumulate surplus value by speculators and households.

Therefore, there is evident need for the review of government policy to explore the plausibility of PPP frameworks for housing. The framework suggested in this study caters for resource and process optimization, delineation of stakeholders, and the point of applicability of PPP for housing. The outcome of the policy shifts allows PPP applicability for different locations based on variable ROI of housing development actors/partners. The study data showed that, 60% of respondents among housing development actors/respondents were motivated by estate locations from which they obtained between 11-30% profits. Profit motive once thought to be the limitation of public-private collaboration is evidently not significant.

More so, the positive changes in government policy in expanding the reach of PPP to cover both rental and ownership tenure would ease the social arrangements among the middle-income groups that currently achieve their housing aspiration outside of institutional framework through contravening building regulatory guidelines. By this, close the gap between design intentions of institutions and the realities of spatial use of organizations. Rather than the target single-family and target-price, housing policy of government that is unable to achieve planned objectives.

**8.5.1.5 Relationship between Housing Development Actors/Partners profit motive, location of estate/typology:** The study shows that profit motives of actors/partners was significant based on return on investments (ROI) and the profit motive for location of estate was even higher. The study indicated a significant positive correlation between actors/partners location of estate due to expected ROI and their profit motive expectations; a P-value obtained was 0.039 less than 0.05. The study also revealed that no significant relationship exist between establishment of the estate typology and actors/partners location based on ROI; a P-value obtained was 0.265 higher than 0.05.

This study shows that there is a strong correlation between actors/partners profit motive and estate location but there is no strong correlation between estate typology and profit motive. Therefore, from the estate typology studied, only PPP requires balancing on profit motive to achieve its planned objectives. Invariably, profit motive is a critical success factor for PPP's.

From the literature, a study by Thorns (1977), showed that HDS is driven by housing values, constraints and sub-markets. This is evident in a study by Olutuah (2003); the study showed that 70.5% of housing type financed with loan fund was bungalows and 83.75% of households paid cash for their housing. These indicators show clearly that return on investment is crucial to actors/partners at every point of interaction and exchange of housing in Lagos.

This study also showed a significant relationship between housing typology and the profit motives of households; they end up renting their allotted housing. Therefore, profit motive is not only a concern for actors/partners but a household too as it is a viable means for accumulating surplus value and a passive investment (in any capitalist democracy setting like Lagos). More so, housing development actors/partners would rather sell to preferred cash buyers rather than other re-payment arrangements. That cash-buyer speculator creates intense sub-markets and distorts the housing value-chain. This is inconsequential to actors/partners since the cost of capital is very high (commercial rate, which is most available, ranges from 19% to 25% per annum).

A containment of profit motive among actors/partners and households is a critical success factor for PPP; since this study has established the association that exist between profit motive and these two principal stakeholders (households and housing development actors/partners).

**8.5.1.6 Relationship between Housing Development Actors/Partners' commitment and levels of building activity regulation (layout/design typology):** The study indicated that there is a strong correlation between actors/partners commitment and building activity regulation ( $P=0.00$  which is less than 0.05). Therefore, actors/partners are more committed when building regulation is less obstructive to institutional planned objectives and organizational housing aspirations. Current practice shows that a minimum of 381days is required from project inception to final planning approval before commencement of works on site (Egbu et.al, 2008).The cost of this period and the uncertainty associated with obtaining final approval is deterrent to actors/partners in Lagos. Since, there is a significant positive correlation between actors/partners commitment and expected return on investment (ROI) with a P-value of 0.03 (which is less than 0.05).

More so, the restrictions by building activity regulation is evident in the disparate nature of standard setting for housing (Mabogunje, et.al, 1978).Therefore, an attempt to build direct based on existing building activity regulatory framework is cumbersome. To achieve all 32-

stages (Egbu et.al, 2008) of the regulatory process makes most households, and actors/partners resort to the use of agents. Unfortunately, the policy framework is silent on building activity approval agents. In practice, it is common to use registered planners and touts who are retired employees of planners and the civil service. The consequences of this trend is that the policy remains unresponsive to changing times, in terms of social settings (Rapoport, 2001; Aradeon, 1982), demands of actors/partners to meet their ROI and the needed architectural design novelty is hitherto inhibited.

It is therefore needful to improve housing development actors/partners commitment by relaxing obsolete stages within the 32-stage process in the building activity by packaging PPP as a separate approach for HDS.

To mitigate existing regulatory processes, this study proposes, duality of assessment for households and housing development actors/partners. By so, redefine the building regulatory process for single house and multiple houses (or housing) with separate technical/operational procedure for evaluating submissions rather than the existing generalized building activity regulations.

The PPP platform would create the needed enablement for actors/partners to fast track their proposals and receive the needed technical attention to the various novel formations as earlier stated in this work. This study was able to demonstrate that more inclusiveness in PPP would emanate when the building activity regulation is less cumbersome.

## **8.6 Contributions of the study to knowledge**

i. This study identified correlating factors that determine HDS, PPP, and AHD as, tenure, access to finance, access to occupancy, actors/partners profit motives, and commitment and building activity regulations. It established that changes in the hierarchy of these factors are possible depending on the prevailing thrust of the HDS. In order to control the thrust of HDS, it established a filter called the universal objective of HDS (the 3-Qfactor).

ii. One of the outcomes of this study is that stakeholders' delineation was in relation to institutional and organizational arrangements of the housing setting. The resultant effect of stakeholders' delineation is that their activity-based hierarchy is more controllable through the AET matrix. Since each stakeholder resources and process for particular HDS activity and thrust is explicit for evaluation purposes. Therefore, the household role in the HDS of public estate becomes determinate and the resources and processes involved optimized (or controlled)



towards achieving AHD. The same control mechanism is applicable to other typologies of HDS for each stakeholder.

**iii.** This study shows that rental is significant to HDS but not in particular to PPP. While the data showed that, most tenure was rental in all three-estate typologies except in the fourth PPP estate typology where ownership tenure was highest. Therefore, PPP encourages owner-occupier housing development and reduces the implicit HDS derivative of surplus value accumulation among stakeholder-speculators. This contribution would enable policy maker's focus on the need to improve the partnership models that would reduce accumulation of surplus value by housing speculators; that are identified in the literature as a major cause of the upsets in the housing market in Lagos.

**iv.** The study further indicated that there is a significant relationship between socio-economic characteristic and housing typology. Most owner-occupiers of PPP estates achieved this outside of their regular income as other sources of income augmented their efforts. By this, the study shows that the housing typology preference is difficult to benchmark, as the majority would strive through methods available to them to fund their housing preference and aspirations. Therefore, a target-policy, which benchmarks price against housing-typology, is misleading as a generalized concept of HDS. From the study, most household respondents that owned or rented often augmented the cost from other undisclosed sources of income as different from regular monthly income. More so, most PPP estates achieved higher degree of quality of estate than their public estate counterparts did; this study shows that the PPP is likely to contribute better to improving the quality of housing typology and variety from a policy position.

**v.** This study demonstrated that PPP functions as a subsystem of HDS. The determinants of PPP and HDS vary depending on the role and circumstances under which such determinants are interacting towards attaining adequacy. Three key components of HDS towards adequacy deduced from the literature are the resource, process, and social optimization criteria's. This enabled the unbundling of HDS's objectives in three directions denoted, as the 3-Qfactor for adequacy. This understanding is useful to stakeholders in setting their objectives and reducing their project focus into a single thrust for effectiveness and by so accentuates the choice of direction for adequacy. In this regard, planned objectives of national housing programmes are likely to be more realistic from policy, conception, planning, design, and implementation viewpoints. A proposal for conceptualizing national housing framework from historic developments demonstrated this realistic viewpoint. The framework suggested duality in

convergence of resource, process, and social optimization for HDS as well as divergence in the outcomes of these optimizations. Therefore, by delineating stakeholders and the housing process efficiently, this study demonstrated that the HDS thrust for adequacy accentuates the housing estate typology of choice, which in this evaluation is PPP.

**vi.** This study further revealed that there was a significant relationship between the actors/partners profit motives and the location of PPP housing estates. This shows that actors/partners need for return on investments (ROI) is significant in conjunction with the commitment to choice and location of housing estate typology for development. This observation should redirect the current land- use concept of locating single-family housing of the middle-income from outside the city limits to the inner city. By so, maximize inner city land plagued with urban blight and that, which is derelict for redevelopment and urban renewal. As against creating new development, corridors that the middle-income groups cannot afford to bear the cost of new infrastructure, let alone cost of housing. Therefore, this study demonstrates the plausibility of PPP's as a tool for promoting urban redevelopment and urban renewal through its operational mechanism and framework. The ultimate proposition is to use PPP models in housing to build stronger communities and better housing environments that are sustainable and socially acceptable.

**vii.** The study shows that the government policy for HDS of Lagos restricts the housing typology to the single-family house form for the middle-income group at both the planning layout and architectural design levels of the housing process. In this research development, it was evident that PPP projects can emanate from transformation of the single-family house form of one plot into multiple-family housing as well as the creation of known housing estate typologies on larger sized parcel of land. The essential contribution of PPP is the utilization of its applicability in different circumstances towards achieving adequacy for housing provision. By this the universal objectives of HDS is fulfilled and enables private participation and brings private novelty to bear on the projects.

**viii.** The adequacy evaluation technique (AET), is a primary resource to housing development actors/partners and experts for revalidating their objectives and monitoring the implementation of their choice of HDS.

**ix.** The composite outcome of resource, process, and social optimization enables housing development actors/partners to streamline their actions in the direction of the PPP strengths and weigh their strategic options as well. This is an important monitoring tool for PPP.

**ix.** By defining the baseline for absolute zero of PPP contributions ( $P_O$ ) and upper and lower limits of partnerships (based on profit motives), the entire PPP contribution becomes more determinate linearly for stakeholders. The region of PPP utilization for projects is less subjective to the whims of politicians. This study defines benchmark for measuring applicability of PPP as a contributory component to AHD. Therefore, the acceptance or rejection of PPP by actors/partners for particular projects is determinate. This open system of evaluation removes the risk of implicit and tacit risks involved in the use of PPP as a tool to achieve AHD.

**x.** This study was able to define determinants of AHD in four broad elemental categories namely the house unit, the housing setting, the housing production, and the housing process. This definition encompasses the entirety of housing for both the household and the housing development actor/partner. The elemental categories of AHD determinants are the baseline for acceptable reference of standards.

#### **8.6.1 PPP Contribution in HDS:**

Public-Private Partnerships evidently contributes to the entire HDS process by strengthening the delivery system in the following ways:

- i.** The study shows that PPP becomes a platform for evaluating public and private sectors' strengths for efficiency towards achieving AHD.
- ii.** PPP enables the direct optimization of public sector housing resources and the private sector housing resources for efficiency.
- iii.** PPP from the study is an essential factor to HDS alongside AHD and housing typology. Given this implication, PPP establishes a generalized platform for other contributions: Since it transcends both the institutional and organizational arrangements among actors/partners.
- iv.** Through an understanding of PPP operations, a real-value proposition emanates (indexing profit motive) which is relevant for the understanding of architectures' contribution in the housing of Lagos. By so, architecture translates minimalist opportunities into function (through resource and process optimization), yet ensuring ROI for actors/partners. The association between enterprise and design becomes the platform to support functional syncretism from which social arrangement accentuates adequacy.

## **CHAPTER NINE: CONCLUSIONS, POLICY IMPLICATIONS, AND RECOMMENDATIONS**

### **9.1 Conclusions**

This thesis research investigated problems of Housing Delivery systems in Lagos, Nigeria. It achieved its research objectives by evaluating a subsystem of HDS, called PPP for its contributions in the housing sector. Consequently, a critical path for Adequate Housing Delivery (AHD) emerged as an Adequacy Evaluation Technique (AET). The research further investigated the association of PPP as a subsystem of HDS through a field study and identified four types of housing estates in Lagos. The method of institutional and organizational arrangements utilized to initiate the housing estates formed the basis for typological delineation. The historic conditions of public and private sector housing initiatives, policies, and programmes invariably formed the nucleus for the entire assessment and analysis.

Through the analysis of literature from architecture, housing, and social theories, the study was able to achieve its objectives in conjunction with a field survey. The literature established previous studies and limitations of the theories that support HDS, PPP, and AHD. The study's inference on the typologies of housing estate that exist in Lagos helped to investigate the determinants of HDS from which planned objectives were reappraised to achieve AHD.

It identified and examined variables such as tenure, household income, infrastructural provision, housing typology, housing taste and preference, profit motives, construction costs, government policy, and process costs. These variables were significantly associated with the HDS, PPP, and AHD. The study established their correlation and interrelatedness. It also established their changing behaviours depending on the circumstances and role of stakeholders involved within the HDS.

The four housing estate typologies identified are public estate, public corporate estate, private estate, and public-private estate. The research also delineated three major groups of stakeholders namely households, housing development actors/partners and housing development experts. Through the identified estate typology and profiling of stakeholders, this study established an association and interrelatedness in terms of the institutional and organizational arrangements. From the foregoing, it emerged that there is significant association between variables thought to be determinants of HDS among stakeholders. For example, households' tenure and housing typology (layout and design) were significantly associated. Households' tenure in PPP typology housing estate was predominantly owner-occupiers, while in Public estates were predominantly rentals. The positive relationship

between housing typology (layout and design), and estate typology shows that more effort towards improving quality of housing emerges in PPP estates when compared to the lesser quality of Public estate typology. The literature review supports the findings from the field survey in that, most proponents of housing studies cited several of the factors thought to be relevant as determinants of HDS. In this research development, the analysis of these factors enhanced the understanding of HDS, PPP in relation to AHD.

However, the point of departure by this research is the delineation of stakeholders' roles in relation to the determinants of HDS. In addition, that there exist a hierarchy among stakeholders (and their roles) and within the determinants of HDS. Three components of the determinants of HDS established this direction of the research namely, PPP, housing typology and AHD; and the HDS mathematical equation demonstrated this existence. The analysis further showed that there is competitiveness among the determining factors of HDS, as separate from the elements of AHD.

Therefore, a change in the hierarchy of stakeholders creates a significant change in the hierarchy of the determinants of HDS in the direction of stakeholder's thrust, which this research called the 'HDS thrust'. This study identified stakeholders thrust from four housing estate typology for its analysis. The outcome demonstrated the hypothesis that, AHD is dependent on stakeholders' delineation and determination of the (universal) objectives of the housing programme. Where PPP is the thrust of HDS, then profit motive of actors/partners is essential. The study developed a model to eliminate the ambiguity of profit motive in PPP; the model measures PPP for acceptance or rejection based on actors/partners influence.

Furthermore, this study established that the role of stakeholders is to optimize both resources and processes of the determinants of HDS and its thrust (in this case PPP), towards achieving AHD. It is from this that a predictive model for optimizing resources and processes called an AET model emerged. This model aids stakeholders in predicting future levels of applicability of choice of PPP.

The AET model as shown in the study, benchmarked contributions on three fronts of HDS namely, the quantity of housing (an increment of single user/family housing), the quality of housing (layout, design, material and technology) and the overall quality of housing environment denoted as the 3Q factor. It demonstrated this through an HDS equation as previously discussed in chapter eight. It deduced a universal objective of any HDS, which is, to produce housing for households based on the adequacy of the 3Q-factor. Therefore, by

applying the AET there would be improvements of the 3Q-factor and this would have corresponding positive contribution to HDS. The measurements of HDS as non-existing, poor, fair, good, and excellent (are represented by 0%,  $\leq 25\%$ ,  $\leq 50\%$ ,  $\leq 75\%$  and  $\leq 100\%$  respectively) were mathematically established through an interval function which oscillates between 0 and 1. Similarly, AHD was established mathematically using the same scale 0 to 1 and interpreted as poor, inadequate, fairly adequate and adequate and very adequate for 5-levels in the same corresponding percentages as above.

In qualitative terms, the three-step AET involves delineating stakeholders, defining outcomes in terms of the 3-Q factor and optimizing resources, processes and social context of the planned housing. It is after this that measurement of outcomes for acceptance or rejection is achievable using the spectrum model in this research development for validation.

Based on the HDS, PPP, and AHD analogy of this research development, a major direction of architectures contribution to HDS emerged. Most architectural theories, consider design as prescription of HDS. Therefore, design generates costs with a promise of value in terms of function, satisfaction, and return on investment (ROI). While function is either space-defined activity (European styled living) or activity-defined space (traditional styled living), yet an emerging syncretism is the humane and pluralistic route within the culture of stakeholders in Lagos, Nigeria.

However, function and satisfaction is often the motivation for the housing programme and policy. In this research, it is evident that PPP utilizes value as its proposition for resource, process, and social optimization. Thereby, making architectural design to create value based on delineated thrust of HDS. The thrust of the HDS creates the value association among elements of optimization from which design emanates. Therefore, PPP's profit motive created the value association for the elements of optimization from which design possibilities emerge for ownership or rental tenure. This proposition enables design to be the foremost outcome, which delimits the function of households' disposition to realities of spatial use, mobility/transition before the element of finance, is brought to bear on the HDS. Four elements of AHD helped in the analysis of this namely the housing unit, setting, production, and process. While, traditional architectural theories stumble into value or find ways to conscript function into value, this study proposes the use of satisfactory PPP to generate function and stabilize value in housing within capitalist democracies of emerging economies like Lagos, Nigeria. Optimization makes AET a predictive tool for PPP and indeed HDS.

Therefore PPP value proposition encompasses the life cycle of the housing programme, instills dynamic architecture and boundless design possibilities from project conception (and change of use or otherwise):Based on the need to define stakeholders, the objectives, optimization and the consequent HDS thrust for the housing programmes.

## **9.2 Policy Implication and Recommendations**

1. Current HDS practice considers PPP in housing as a developer oriented policy. This supported the formation of Real Estate Developers Association of Nigeria (REDAN) an offshoot of the enacted government policy that gave recognition to private sector involvement in housing development. By redefining the stakeholders in HDS, it delineates the private sector within an all-encompassing framework as it transcends the household, housing development actor/partners and experts. Indeed, there are quasi-government agencies, non-corporate bodies/organizations excluded from the private sector that are engaged in the development of housing for their immediate constituencies, and the public like any private enterprise.

There is a need to broaden the PPP scope along its institutional and organizational relations. Although disparate regulatory sources exist for standard setting, this study brings to bear the potential of PPP to create a platform from which a redefinition of stakeholders' involvement towards AHD emanates. This would invariably improve the policy framework, create a template for standard setting among actors/partners and encourage the much-discussed novelty of PPP's potential (of arrangements and design), in the HDS of Lagos and indeed Nigeria.

More so, to redefine stakeholders is to include experts from both the private and the public sector whose skills are brought into the capacity of PPP for utilization in the much needed reduction of the 32-stage development rights problems in Lagos, Nigeria. For instances, parts of the city could be delineated to allow for private sector approval consultants (housing development experts drawn from AEC professionals) within the PPP framework as against the statutory building regulatory framework which is slow and disparate.

2. Government should undertake to redefine the objectives of housing as proposed by this study. The universal objectives of housing called the 3-Q factor enables policy to evaluate performance of planned programmes in terms of increased quantity of housing, enhanced quality of housing and improved housing environment. This would ease the problem with current approach of target-cost/design based housing provision.

In addition, government policy should create enabling environment through resource, process, and social optimization from existing institutions and organizations as proposed by this study towards achieving AHD.

3. Current government focus on the middle-income class for target-cost housing provision should be channeled to creating the enabling environment to redesign urban precincts with the intent of increasing quantity, quality of housing and the environment; for both rental and ownership tenure through newer/innovative housing design/layout typologies. The ubiquitous rooming apartment in Lagos would serve as test case for policy shifts in relation to design innovation from which PPP's can be better evaluated. The outcomes of institutional and organizational arrangements would be evident once government enables this window of housing development. More so, a robust PPP policy would boost redevelopment of abandoned projects (housing and others) with the inclusion of social arrangement issues in relation to registered transactions and profit levels of stakeholders.

4. The nature of existing housing conditions is such that the design typologies emanates from the financial stipulations of the National housing policy and the restrictions imposed by disparate building regulatory framework. By redefining stakeholders in the housing policy as stipulated by this work, a more responsive platform for PPP shall emerge. This invariably circumvents the stipulations of National policy and building regulation restrictions from which housing design typologies traditionally emanate. The implication is that architectural design becomes a more responsive expression (of function and value) for stakeholders.

5. Currently, there is no government policy on the use of derelict public land or lost spaces for housing in the city of Lagos. There is a general *ad hoc* approach occasioned by the Executive Governor of the state, who is the chief custodian of government land as constituted by the land use decree of 1978. This study demonstrated the plausibility of public-private association towards AHD through non-financial exchanges. For instance, is in terms of terms of building material, logistics, and equipments that are essential to reducing the cumbersomeness of HDS in Lagos.

Urbanization and poor regional networks makes commuting within and away from the city a problem. Therefore, government should concentrate on making sites/yards out of such spaces to foster distribution of building materials for various levels of PPP projects to ease the associated logistics issues. This is through the application of PPP optimization in creating infrastructure nodes for stakeholders. From the understanding of this study, infrastructure is



critical to housing development yet households and housing development actors/partners pay upfront for this cost without recourse to the economic implication on their disposable income and cost of capital respectively. Policies could address this as incentive to housing development actors/partners to reduce profitability or as subsidy to households. This research proposes that, with such provisions most housing development actors/partners would have further reduced the effective need to meet the criteria set by building activity regulation by concentrating on standard assemblage rather than huge investment in procurement and technical expertise; and so reduce construction cost in relation to quality and material logistics. A further implication is that it would enable the public partner index their cost as part of the optimization process and by so improve the commitment of private sector partners. This would create the needed enablement to argue for reduced profit motive by the public sector partner. As against current practice where the public partner provides land alone and private partners have to go through a maze of incongruent statutes and issues to achieve their housing production.

6. Most middle-income earners who were owner-occupiers were able to afford their housing through other undisclosed sources of income. Government should review its financial policy framework for housing from a funding based structure. This is against the achievement by households to fund housing through undisclosed income sources and the need to see the inherent opportunities in translating such capabilities into newer financial models. By so, accommodate traditional forms of housing finance-models that are different from current western models established by formal banking and tied to formal employment and monthly repayments that are not socially sustainable.

7. This research also indicated that most households and housing development actors/partners traditionally achieved their housing projects through labour intensive methods; hands on purchases, construction and little top-end expert advisory. Generally, they are unable to use new technology of ease due to initial capital intense cost of equipments. Government should look into creating the needed enabling environment for support forms of PPP's in relation to process optimization for households and housing development actors/partners. This would bring more standardized components closer to development sites and enable stakeholder's access plants and equipments that would facilitate their processes and invariably improve their commitment to policy.

8. The existing policy framework suggests no incentives for efficient use of local material, alternative energy, and technology in achieving its housing objectives. By applying the 3-Q

factor and optimization techniques, the policy automatically redefines its HDS thrust. The intensity of use of AET enables housing projects to focus on the factors that are contextual to its social and environmental quest as much as the universal objectives of housing (the intensity of use of AET is drawn from the redefinition of stakeholders as this delimits the knowledge base of involvement as well as refines the HDS thrust). This study suggests that by accentuating AHD, an emerging thrust of preference for PPP emerges from which the private partner draws on the benefits of government policy incentives. By so government can create PPP sites for ease of marketability to the private sector.

The Adequacy Evaluation Technique (AET) proposed by this study is for use in housing development towards articulating housing objectives and realization. This predictive model enables housing development stakeholders evaluate objectives through prioritization of resources and processes involved in the development of the housing project. This would improve current government regulatory framework for HDS that is weak and capital intensive.

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# APPENDIX-I

## QUESTIONNAIRE TYPE (A)

Designed to obtain required data to test minor hypotheses-I in relation to Influences on householders choice of HDS

### General Instructions

Please answer the following questions by ticking the relevant answers.

### A-HOUSEHOLDS' PROFILE ( attributes of householders can influence their choice of HDS/determinants of HDS)

1. How would you describe your rights to this house?

- (1)ownership with government title
- (2)ownership with letter of allocation
- (3)ownership without title but receipt of payment/s
- (4)rental
- (5) squatter

2. Please tick your age group.  
65(5)

Below 30yrs(1) 31-40yrs(2) 41-50yrs(3) 51-65yrs(4) Above

3. Please tick your gender.

Male(1)

Female(2)

4. Marital status.

Single(1) Married(2) separated/Divorced(3)

widow/widower(4) others(5)

5. Dependants'categories

- (1)nuclear family
- (2)extended family
- (3) friends
- (4)domestic staff

6. How many dependants/wards live with you in this house?

Below 5person(1) 6-10 persons(2) Above11 persons(3)

7. describe your level of education.

- (1)trade school/apprenticeship
- (2)primary school
- (3)secondary school
- (4)tertiary school
- (5)professional membership/association

8. Please tick your income group per month

- (1)N75k (\$500usd)and below
- (2)N76k-N150k(\$501-\$1000usd)
- (3)N151-N300k(\$1001-\$2000usd)
- (4)N301k-N500k(\$2001-\$3000usd)

9. please tick your source/s of income

- (1)monthly salary
- (2)profit from trading/contracts
- (3)gifts
- (4)combination of 1 or more above
- (5)other sources not as above

10. Which of the following best describes your employment type?  
public/government(1) private/non self-employed(2) private/self-employed(3) others(4)
11. How long have you been living, staying or working in Lagos?  
5yrs and below(1) between 6-10yrs(2) 11yrs and above (3)
12. Which of the following religious practices suitably describes your belief system?  
Christianity (1) Islam(2) Traditional worship (3) others(4)
13. Which of the following describes your geo-political region and indicate your state of origin?  
(1)North central;state.....  
(2)North-east:state.....  
(3)north-west;state.....  
(4)south-east;state.....  
(5)south-west;state.....  
(6)south-south;state.....
14. Which of the following closely describes the establishment of your estate?  
(1)government initiated;public  
(2)private developer initiated/individual,family or company ;private  
(3)government corporate agency/like LSDPC;public corporate  
(4)government and private developer;public-private
15. Which of the following suitably describes your house type  
(1)bungalow(1-3bedrooms)  
(2)flat in a block of 4 or more(1-3bedrooms)  
(3)terrace house(1-4bedrooms)  
(4) semi-detached house(3-5bedrooms)  
(5)detached house(3 bedrooms and above)
16. How did you acquire access to this house; purchase, build or rental?  
(1)cash payment/s  
(2)loan mortgage banks  
(3)loan commercial banks  
(4)combination of any 1,2 and 3 above  
(5)others
17. Which of the following closely describes the purchase/construction cost of the housing unit?  
(1)below N5m(\$33,000usd)  
(2)N5.1-N10m(\$33,100-\$66,000)  
(3)N10.1-N15m(\$66,100-\$99,000)  
(4)N15.1 and above(\$99,100 and above)

18. How would you describe the applicability of the following public sector involvement to constructing/buying your house?

| Criteria                           | Not applicable at all (1) | Not applicable (2) | Neutral (3) | Applicable (4) | Very applicable (5) |
|------------------------------------|---------------------------|--------------------|-------------|----------------|---------------------|
| Initiation of the project          |                           |                    |             |                |                     |
| Provision of land                  |                           |                    |             |                |                     |
| Financing                          |                           |                    |             |                |                     |
| Planning and design                |                           |                    |             |                |                     |
| Authorization                      |                           |                    |             |                |                     |
| Building Construction              |                           |                    |             |                |                     |
| Infrastructure provision           |                           |                    |             |                |                     |
| Transfer of units                  |                           |                    |             |                |                     |
| Access to occupancy                |                           |                    |             |                |                     |
| Obtaining certificate of occupancy |                           |                    |             |                |                     |
| Maintenance and Management         |                           |                    |             |                |                     |

19. How important are the following criteria for constructing your house?

| Actions  | Not at all (1) | Fairly Important (2) | Neutral (3) | Important (4) | Very Important (5) |
|--|----------------|----------------------|-------------|---------------|--------------------|
| The use of Government allocation/layout for land acquisition   |                |                      |             |               |                    |
| The use of an architect for design   |                |                      |             |               |                    |
| The use of an architect for supervision  |                |                      |             |               |                    |
| The architect to conform to your design aspirations  |                |                      |             |               |                    |
| The need to build up the entire land as you perceive you require irrespective of professional advice                                     |                |                      |             |               |                    |
| Evidence of Proper title to property   |                |                      |             |               |                    |
| Obtaining approval before construction   |                |                      |             |               |                    |
| Complying with all pre-planning approval documentation   |                |                      |             |               |                    |
| The location of the house/estate   |                |                      |             |               |                    |
| Evidence/promise of infrastructure   |                |                      |             |               |                    |
| The use of imported materials  |                |                      |             |               |                    |
| The use of govt building inspectors during construction  |                |                      |             |               |                    |
| The use of a registered building contractor/builder  |                |                      |             |               |                    |
| The use of two sets of drawings; One to seek govt. approval another for construction which contravenes in practice that approval granted |                |                      |             |               |                    |

## 20. How cumbersome is the building process in Lagos?

- a) Land acquisition ---very cumbersome(1) fairly cumbersome(2) cumbersome(3) not cumbersome(4) indifferent(5)
- b) Obtaining title-----very cumbersome(1) fairly cumbersome(2) cumbersome(3) not cumbersome(4) indifferent(5)
- c) Hiring an architect -- very cumbersome(1) fairly cumbersome(2) cumbersome(3) not cumbersome(4) indifferent(5)
- d) Obtaining designs--- very cumbersome(1) fairly cumbersome(2) cumbersome(3) not cumbersome(4) indifferent(5)
- e) Hiring services of other professionals-----
- f) very cumbersome(1) fairly cumbersome(2) cumbersome(3) not cumbersome(4) indifferent(5)
- g) Paying fees----- very cumbersome(1) fairly cumbersome(2) cumbersome(3) not cumbersome(4) indifferent(5)
- h) Planning process--- very cumbersome(1) fairly cumbersome(2) cumbersome(3) not cumbersome(4) indifferent(5)
- i) Use of approval agent- --very cumbersome(1) fairly cumbersome(2) cumbersome(3) not cumbersome(4) indifferent(5)
- j) Obtaining approval yourself very cumbersome(1) fairly cumbersome(2) cumbersome(3) not cumbersome(4) indifferent(5)
- k) Paying government charges very cumbersome(1) fairly cumbersome(2) cumbersome(3) not cumbersome(4) indifferent(5)
- l) Finding a builder very cumbersome(1) fairly cumbersome(2) cumbersome(3) not cumbersome(4) indifferent(5)
- m) Managing the building activity very cumbersome(1) fairly cumbersome(2) cumbersome(3) not cumbersome(4) indifferent(5)
- n) Making purchase/materials etc very cumbersome(1) fairly cumbersome(2) cumbersome(3) not cumbersome(4) indifferent(5)
- o) Making payments, goods/services very cumbersome(1) fairly cumbersome(2) cumbersome(3) not cumbersome(4) indifferent(5)
- p) Finding materials/alternatives very cumbersome(1) fairly cumbersome(2) cumbersome(3) not cumbersome(4) indifferent(5)
- q) Managing Cost overrun very cumbersome(1) fairly cumbersome(2) cumbersome(3) not cumbersome(4) indifferent(5)

### HOUSEHOLD LIFESTYLE PREFERENCE ( perception issues in relation to adequacy)

21..How important are the following criteria to you?

| Criteria              | Not<br>At all<br>(1) | Fairly<br>Important(2) | Neutral<br>(3) | Important<br>(4) | Very<br>Important<br>(5) |
|-----------------------|----------------------|------------------------|----------------|------------------|--------------------------|
| Size of land          |                      |                        |                |                  |                          |
| Size of bedrooms      |                      |                        |                |                  |                          |
| Size of masterbedroom |                      |                        |                |                  |                          |
| Size of living room   |                      |                        |                |                  |                          |
| Size of house         |                      |                        |                |                  |                          |
| Size of toilets       |                      |                        |                |                  |                          |
| Size of kitchen       |                      |                        |                |                  |                          |
| Size of storage       |                      |                        |                |                  |                          |
| Size of stairs        |                      |                        |                |                  |                          |
| Size of estate        |                      |                        |                |                  |                          |
| Size of wardrobes     |                      |                        |                |                  |                          |

22.How important are the following attributes?

|   | Attribute   | Not<br>at all<br>(1) | Fairly<br>Important(2) | Neutral<br>(3) | Important<br>(4) | Very<br>Important<br>(5) |
|---|---|----------------------|------------------------|----------------|------------------|--------------------------|
| A | Location of estate within 30mins of central lagos/market/ CBD                         |                      |                        |                |                  |                          |
| B | Govt planned estate   |                      |                        |                |                  |                          |
| C | Private planned estate  |                      |                        |                |                  |                          |
| D | Govt and private planned estate   |                      |                        |                |                  |                          |
| E | Arbitrary purchase of land from families and construction of house in unplanned areas |                      |                        |                |                  |                          |
| F | Availability of govt provided electricity,water                                       |                      |                        |                |                  |                          |
| G | Availability of privately provided generator and bore in the estate                   |                      |                        |                |                  |                          |
| H | Availability of recreation area in the estate   |                      |                        |                |                  |                          |
| I | Availability of shopping center in the estate   |                      |                        |                |                  |                          |
| J | Availability of shops to rent in the estate   |                      |                        |                |                  |                          |
| K | Adaptability of house to create shops and home based office/business                  |                      |                        |                |                  |                          |
| L | Use of trees/flowers along drive ways   |                      |                        |                |                  |                          |
| M | Use of street lights  |                      |                        |                |                  |                          |
| N | Provision of motorable roads/street lights/drainage                                   |                      |                        |                |                  |                          |
| O | Compulsory 30%green area within premise   |                      |                        |                |                  |                          |
| P | Provision of functional side walks  |                      |                        |                |                  |                          |
| Q | Provision of boys quarters  |                      |                        |                |                  |                          |
| r | Provision of security fence and gate house to personalize premises                    |                      |                        |                |                  |                          |
| S | Provision of waste disposal bins/collection in front of house                         |                      |                        |                |                  |                          |
| t | Provision of additional space within premises for extension of house at will          |                      |                        |                |                  |                          |
| U | Provision of security fence around the estate   |                      |                        |                |                  |                          |
| V | Provision of common water,electricity etc for the estate                              |                      |                        |                |                  |                          |

23.What size of estate would you prefer to live in?

Below 25 households(1) 26-50 households(2) 51-100households(3) 101-200households(4)

Above 200households(5)

### HOUSEHOLDS PERCEPTION OF HOUSING ENVIRONMENT/QUALITY OF HOUSING

24.How important are the following material/fitting criteria to you?

| Criteria  | Not important<br>(1) | Fairly Important(2) | Does not apply<br>(3) | Important<br>(4) | Most Important<br>(5) |
|---|----------------------|---------------------|-----------------------|------------------|-----------------------|
| Use of imported roofing sheets                      |                      |                     |                       |                  |                       |
| Use of local asbestos roofing sheets                |                      |                     |                       |                  |                       |
| Use of local zinc roofing sheets                    |                      |                     |                       |                  |                       |
| Use of local asbestos ceiling boards                |                      |                     |                       |                  |                       |
| Use of imported plaster boards ceiling              |                      |                     |                       |                  |                       |
| Use of imported tiles<br>(vitrified,granite,marble) |                      |                     |                       |                  |                       |
| Use of imported baths/jacuzzi/wc/whb                |                      |                     |                       |                  |                       |
| Use of local baths/wc/whb                           |                      |                     |                       |                  |                       |
| Use of imported doors                               |                      |                     |                       |                  |                       |
| Use of aluminum windows                             |                      |                     |                       |                  |                       |
| Use of plastic windows                              |                      |                     |                       |                  |                       |
| Use of louver windows                               |                      |                     |                       |                  |                       |

25.How applicable are the following statements to your house design?

| Criteria  | Not Applicable<br>At all<br>(1) | Not applicable<br>(2) | Neutral<br>(3) | Applicable<br>(4) | Very applicable<br>(5) |
|---|---------------------------------|-----------------------|----------------|-------------------|------------------------|
| A house with an entrance porch/verrandah is most important  |                                 |                       |                |                   |                        |
| A view of the street from the entrance porch  |                                 |                       |                |                   |                        |
| Tall fences that keep the house ground floor fully enclosed from the public/neighbors feels most secure                 |                                 |                       |                |                   |                        |
| The space for boys quarters or its existence makes for my perception of adequacy  |                                 |                       |                |                   |                        |
| All bedrooms ensuite with toilets(bath/sh/wc/whb) is the acceptable practice  |                                 |                       |                |                   |                        |
| The house must have the correct climatic orientation for all spaces   |                                 |                       |                |                   |                        |
| Particular about energy savings and use of alternative energy source aside from public supply and private generator use |                                 |                       |                |                   |                        |
| Particular about Car park spaces within the premises  |                                 |                       |                |                   |                        |
| As home owner; particular about been  |                                 |                       |                |                   |                        |



|  |  |  |  |  |  |
|--|--|--|--|--|--|
| able to enter the house and exit same without been seen from the living room/public space in the house |  |  |  |  |  |
| Spaces for preparing local food on the floor is most important   |  |  |  |  |  |

26.How applicable are the following statements to the coalition among residents?

| Criteria   | Not Applicable at all (1) | Applicable(2) | Neutral (3) | Applicable (4) | Very applicable (5) |
|--|---------------------------|---------------|-------------|----------------|---------------------|
| There is a landlord/residents association meeting in the estate  |                           |               |             |                |                     |
| This meeting is held once a month to discuss estate issues   |                           |               |             |                |                     |
| Everyone complies with the outcomes of these discussions   |                           |               |             |                |                     |
| These outcomes have improved the state of the estate housing environment.  |                           |               |             |                |                     |
| There is a monthly contribution which is paid by all residents for general upkeep  |                           |               |             |                |                     |
| This amount is paid by all   |                           |               |             |                |                     |
| The amount is considered too much  |                           |               |             |                |                     |
| This residents association is able to make representation to the councilor,the local chairman and consequently representatatives of the lower and upper house for policy changes that would improve the estate housing environment |                           |               |             |                |                     |
| The estate bye-laws are registered and recognized by the law of the state  |                           |               |             |                |                     |
| The leadership of the estate takes into consideration the need to rotate it around national ethnic divides rather than simply competence   |                           |               |             |                |                     |
| The attendance to the montly meetings is by over 50% of residents always   |                           |               |             |                |                     |

**CODING****QUESTIONNAIRE A-**

| <b>Question<br/>nos.(VA)</b> | <b>Variable code</b> |
|------------------------------|----------------------|
| <b>1</b>                     | <b>V02</b>           |
| <b>2</b>                     | <b>V03</b>           |
| <b>3</b>                     | <b>V04</b>           |
| <b>4</b>                     | <b>V05</b>           |
| <b>5</b>                     | <b>V06</b>           |
| <b>6</b>                     | <b>V07</b>           |
| <b>7</b>                     | <b>V08</b>           |
| <b>8</b>                     | <b>V09</b>           |
| <b>9</b>                     | <b>V10</b>           |
| <b>10</b>                    | <b>V11</b>           |
| <b>11</b>                    | <b>V12</b>           |
| <b>12</b>                    | <b>V13</b>           |
| <b>13</b>                    | <b>V14</b>           |
| <b>14</b>                    | <b>V15</b>           |
| <b>15</b>                    | <b>V16</b>           |
| <b>16</b>                    | <b>V17</b>           |
| <b>17</b>                    | <b>V18</b>           |
| <b>18</b>                    | <b>V19-V29</b>       |
| <b>19</b>                    | <b>V30-V43</b>       |
| <b>20</b>                    | <b>V44-V59</b>       |
| <b>21</b>                    | <b>V60-V70</b>       |
| <b>22</b>                    | <b>V71-V92</b>       |
| <b>23</b>                    | <b>V93</b>           |
| <b>24</b>                    | <b>V94-V105</b>      |
| <b>25</b>                    | <b>V106-V115</b>     |
| <b>26</b>                    | <b>V116-V126</b>     |

# APPENDIX-II

## QUESTIONNAIRE TYPE (B)

Attributes of the housing development actor/partner in relation to partnership arrangements (of both institutional and organizational); designed to obtain data to test minor hypotheses-I and II in relation to partners arrangements

### B-HOUSING DEVELOPMENT ACTOR/PARTNERS' PROFILE

1. Name.....(optional) and tick the location of the estate in Lagos.
  - (1) group I-(oshodi-isolo, somolu, ikorodu, mushin, lagos mainland, kosofe, surulere)
  - (2) group II-(agege, alimosho, ikeja, ifako-ijaye)
  - (3) group III (epe, eti-osa, ibeju-lekki lagos, Island)
  - (4) group IV (amuwo-odofin, apapa, ajeromi-ifelodun, ojo, badagry)
2. Which of the following suitably describes the establishment of the estate?
  - (1) public
  - (2) private
  - (3) public-corporate
  - (4) public-private
3. Which of the following periods best describes the age of the estate?
  - (1) 5 years and below
  - (2) 6-10 years
  - (3) 11-15 years
  - (4) 16 years and above
4. How long has the development firm been in existence?
  - (1) 5 years and below
  - (2) 6-10 years
  - (3) 11-15 years
  - (4) 16 years and above
5. What tenure does the estate ownership have?
  - (1) lease-hold(1-99 years)
  - (2) free-hold
  - (3) sublease
  - (4) family land/memorandum of sale
  - (5) none
6. Which of the following best describes provision of infrastructure in the estate?
 

|  |              |
|--|--------------|
| (a) access road provided by developer.....                   | Yes(1) No(2) |
| (b) estate road network provided by developer.....           | Yes(1) No(2) |
| (c) storm water drainage provided by developer.....          | Yes(1) No(2) |
| (d) electricity(PHCN) supply provided by developer.....      | Yes(1) No(2) |
| (e) sewage collection/disposal by developer.....             | Yes(1) No(2) |
| (f) pipe borne water supply provided by developer...         | Yes(1) No(2) |
| (g) solid waste collection/disposal provided by developer... | Yes(1) No(2) |
7. Which of the following suitably describes access to land for the estate?
  - (1) inherited land at no cost
  - (2) subsidized land by government allocation below 50% market value
  - (3) subsidized land by government allocation but above 50% market value
  - (4) unsubsidized land at market value
  - (5) free land by government allocation
8. Was the choice of location for the estate influenced by the need to achieve return on investment(ROI)?
  - (1) Yes(10% and below ROI)
  - (2) Yes(11-30%ROI)
  - (3) Yes(31-50%ROI)
  - (4) Yes(51% ROI and above)
  - (5) No

9.How would you describe the increasing depreciation of the Naira( effect of foreign exchange )on the outcome of the estate development?

- (a)increases cost of cement affects quality of block,concrete and rendering.....Yes(1)No(2)
- (b)increases cost of roof covering-affects quality of roofing sheets.....Yes(1)No(2)
- (c)increases cost of finishes-affects quality of materials and workmanship.....Yes(1)No(2)
- (d)increases cost of fittings and fixtures-affects durability and utility.....Yes(1)No(2)
- (e)increases cost of aesthetics-affects decoration by reduction.....Yes(1)No(2)

10.Source/s of funding

- (1)NHF contribution-FMBN funding system
- (2)commercial loan system
- (3)other financial institutions (OFI) funding system
- (4)privately sourced local funds(non-financial institutions)
- (5)privately sourced foreign funds
- (6) combination of any two or more sources

11.Which of the following suitably describes your profit motives in housing estate development?

- (1)not important at all
- (2)fairly important
- (3)neutral
- (4)important
- (5)very important

12.How would you describe your commitment to estate development?

- (a)Strict Use of registered professionals always/payment of full fees.....Yes(1) No(2)
- (b)Strict Use of certified contracting firms/contract administration process for all estate constructionYes(1) No(2)
- (c)Strict Use of building regulation guidelines to achieve planning design objectives.....Yes(1) No(2)
- (d)Strict Use of value added technology .....Yes(1) No(2)
- (e)Continuous Use of research to improve outcome of estate development.....Yes(1) No(2)
- (f)Strict Use of SON certified building materials.....Yes(1) No(2)

13.Which of the following suitably describes your opinion of construction cost?

- (1)not high at all
- (2)fairly high
- (3)very high
- (4)too high

14.which of the following suitably describes the level of technology utilized for implementing the estate?

- (1>manual
- (2)intermediate technology
- (3)high technology
- (4)combination of any 2 or more above

15.Does the fulfillment of government policy objectives in terms of quantity of housing stock, quality of housing and quality of housing environment applicable to the criteria's for your estate development?

- (1)not applicable
- (2)applicable
- (3)strongly applicable
- (4)neutral

**CODING****QUESTIONNAIRE B**

| <b>Question<br/>nos.(VB)</b> | <b>Variable code</b> |
|------------------------------|----------------------|
| <b>1</b>                     | <b>V02</b>           |
| <b>2</b>                     | <b>V03</b>           |
| <b>3</b>                     | <b>004</b>           |
| <b>4</b>                     | <b>V05</b>           |
| <b>5</b>                     | <b>V06</b>           |
| <b>6</b>                     | <b>V07-V13</b>       |
| <b>7</b>                     | <b>V14</b>           |
| <b>8</b>                     | <b>V15</b>           |
| <b>9</b>                     | <b>V16</b>           |
| <b>10</b>                    | <b>V17</b>           |
| <b>11</b>                    | <b>V18</b>           |
| <b>12</b>                    | <b>V19-V24</b>       |
| <b>13</b>                    | <b>V25</b>           |
| <b>14</b>                    | <b>V26</b>           |
| <b>15</b>                    | <b>V27</b>           |

# APPENDIX-III

## QUESTIONNAIRE TYPE (C)

Attributes of the housing experts in relation to influencing AHD and partnership arrangements (of both institutional and organizational); designed to obtain data to test minor hypotheses-IV in relation to levels of adequacy.

### C-HOUSING EXPERTS' PROFILE

1. Which of the following best describes the sector of housing where you utilize your professional role/influence to shape HDS?

- (1) Public sector
- (2) private sector
- (3) public-corporate
- (4) public-private
- (5) none

2. Please tick your professional category (AEC, architecture, engineering construction; REDAN, real estate developers association of Nigeria)

- (1) AEC professional
- (2) non AEC professional
- (3) REDAN developer
- (4) non-REDAN developer

3. How would you best describe your professional experience?

- (1) 10 years and below
- (2) 11-20 years
- (3) 21-30 years
- (4) 31 years and above

4. Please tick which academic qualification suitably describes your experience.

- (1) diploma/apprenticeship
- (2) bachelors degree
- (3) masters degree
- (4) doctoral degree
- (5) professor

5. How would you describe your involvement (current/previous) in Housing Delivery System of Lagos?

- (1) Yes /directly
- (2) Yes/indirectly
- (3) No
- (4) Not applicable

6. How favourably inclined are you to the use of Public Private Partnership as a housing delivery system?

- (1) not inclined
- (2) fairly inclined
- (3) neutral
- (4) inclined
- (5) strongly inclined

7. Which of the following government subsidy would you consider as appropriate motivation for partnering with government to achieve planned objectives in housing?

- (1) government provides secure land/title only
- (2) government provides funding (long/short term) for developers
- (3) government provides finance for households
- (4) government provides land, and finance for developers and households

8. Which of the following suitably describes your satisfaction with current building regulations and standards in Lagos?

- (1) not satisfactory
- (2) fairly satisfactory
- (3) neutral
- (4) satisfactory



9. Is the single family house per plot the route for achieving the required quantity/quality of housing, and quality of housing environment in Lagos?

Yes(1) No(2) don't know(3)

10. How would you describe the adequacy of current roles of professionals in the development of housing in Lagos?

Not adequate at all(1) fairly adequate(2) neutral (3) adequate(4) very adequate(5)

11. How important are the following development criteria in Housing Delivery System from your experience?

| Development criteria        | Not at all(1) | Fairly Important(2) | Neutral (3) | Important (4) | Very important (5) |
|-----------------------------|---------------|---------------------|-------------|---------------|--------------------|
| Housing needs               |               |                     |             |               |                    |
| Government policy           |               |                     |             |               |                    |
| Profit motive               |               |                     |             |               |                    |
| Availability of finance     |               |                     |             |               |                    |
| Provision of infrastructure |               |                     |             |               |                    |
| Location of land            |               |                     |             |               |                    |
| Tenure                      |               |                     |             |               |                    |
| Government subsidy          |               |                     |             |               |                    |
| Access to land              |               |                     |             |               |                    |

12. How would you describe the impact of importation on layout and design typologies towards achieving Adequate Housing Delivery?

| Impact of importation  | Not at all(1) | Fairly Important(2) | Neutral (3) | Important (4) | Very important (5) |
|--|---------------|---------------------|-------------|---------------|--------------------|
| Syncretic designs(Christian/western, Islamic and indigenous tradition influence. |               |                     |             |               |                    |
| Cultural response  |               |                     |             |               |                    |
| Climatic conditions  |               |                     |             |               |                    |
| Building material  |               |                     |             |               |                    |
| Technology/capacity building   |               |                     |             |               |                    |
| Building activity  |               |                     |             |               |                    |
| Regulation and standards   |               |                     |             |               |                    |

13. How would you best describe your direct professional representation in the general scheme of housing delivery in Lagos?

(1) institutional policy-advisory

(2) institutional policy-implementation

(3) institutional policy-monitoring

(4) organizational policy-advisory

(5) organizational policy-implementation

(6) organizational policy-monitoring

(7) none of the above

14. In the applicability of your direct professional representation how important did you find the following criteria for the purchase/construction of your house in Lagos?

| Actions   | Not at all (1) | Fairly Important(2) | Neutral (3) | Important (4) | Very Important (5) |
|---|----------------|---------------------|-------------|---------------|--------------------|
| The source of funding for you to buy  |                |                     |             |               |                    |
| The interest rate offered to you  |                |                     |             |               |                    |
| The size of house/land  |                |                     |             |               |                    |
| The building style  |                |                     |             |               |                    |
| The Estate type(public ,private or Others)  |                |                     |             |               |                    |
| Evidence of Proper title of property  |                |                     |             |               |                    |
| Buying from known developer   |                |                     |             |               |                    |
| The quality of the structure  |                |                     |             |               |                    |
| The location of the house/estate  |                |                     |             |               |                    |
| Evidence/promise of infrastructure  |                |                     |             |               |                    |
| The quality of finishings   |                |                     |             |               |                    |
| The use of a mortgage originator as against personal sourcing of mortgage   |                |                     |             |               |                    |
| Repayment terms of less than ten years  |                |                     |             |               |                    |
| Buying a land/house that cannot be registered in your name due to titling problem   |                |                     |             |               |                    |
| Ownership of a house in a neighbourhood of your choice next to squatter settlement or shanty town                                       |                |                     |             |               |                    |
| The use of Government allocation/layout for land acquisition  |                |                     |             |               |                    |
| The use of an architect for design  |                |                     |             |               |                    |
| The use of an architect for supervision   |                |                     |             |               |                    |
| The architect to conform to your design aspirations   |                |                     |             |               |                    |
| The need to build up the entire land as you perceive you require irrespective of professional advice                                    |                |                     |             |               |                    |
| Evidence of Proper title to property  |                |                     |             |               |                    |
| Obtaining approval before construction  |                |                     |             |               |                    |
| Complying with all pre-planning approval documentation  |                |                     |             |               |                    |
| The location of the house/estate  |                |                     |             |               |                    |
| Evidence/promise of infrastructure  |                |                     |             |               |                    |
| The use of imported materials   |                |                     |             |               |                    |
| The use of govt building inspectors during construction   |                |                     |             |               |                    |
| The use of a registered building contractor/builder   |                |                     |             |               |                    |
| The use of two sets of drawings;One to seek govt. approval another for construction which contravenes in practice that approval granted |                |                     |             |               |                    |

**CODING****QUESTIONNAIRE C**

| <b>Question<br/>nos.(VC)</b> | <b>Variable code</b> |
|------------------------------|----------------------|
| <b>1</b>                     | <b>V02</b>           |
| <b>2</b>                     | <b>V03</b>           |
| <b>3</b>                     | <b>004</b>           |
| <b>4</b>                     | <b>V05</b>           |
| <b>5</b>                     | <b>V06</b>           |
| <b>6</b>                     | <b>V07</b>           |
| <b>7</b>                     | <b>V08</b>           |
| <b>8</b>                     | <b>V09</b>           |
| <b>9</b>                     | <b>V10</b>           |
| <b>10</b>                    | <b>V11</b>           |
| <b>11</b>                    | <b>V12-V20</b>       |
| <b>12</b>                    | <b>V21-27</b>        |
| <b>13</b>                    | <b>V28</b>           |
| <b>14</b>                    | <b>V29-57</b>        |

# APPENDIX-IV

(TESTS ON QUESTIONNAIRE-A)

[DataSet1] C:\Users\TONY ALABI\Desktop\new spss thesis data.sav

### Credit

|   |
|---|
| Catreg                                    |
| Version 2.1                               |
| By  |
| Data Theory Scaling System Group (DTSS)   |
| Faculty of Social and Behavioral Sciences |
| Leiden University, The Netherlands        |

### Case Processing Summary

|                                     |    |
|-------------------------------------|----|
| Valid Active Cases                  | 85 |
| Active Cases with Missing Values(a) | 3  |
| Supplementary Cases                 | 0  |
| Total                               | 88 |
| Cases Used in Analysis              | 85 |

a Excluded case(s): 25 63 64.

### Model Summary

| Multiple R | R Square | Adjusted R Square |
|------------|----------|-------------------|
| .806       | .650     | .446              |

Dependent Variable: VAR00002

Predictors: VAR00003 VAR00004 VAR00005 VAR00006 VAR00007 VAR00008 VAR00009 VAR00010 VAR00011 VAR00012 VAR00013 VAR00014 VAR00015 VAR00016 VAR00017 VAR00018

### ANOVA

|            | Sum of Squares | df | Mean Square | F     | Sig. |
|------------|----------------|----|-------------|-------|------|
| Regression | 55.270         | 31 | 1.783       | 3.178 | .000 |
| Residual   | 29.730         | 53 | .561        |       |      |
| Total      | 85.000         | 84 |             |       |      |

Dependent Variable: VAR00002

Predictors: VAR00003 VAR00004 VAR00005 VAR00006 VAR00007 VAR00008 VAR00009 VAR00010 VAR00011 VAR00012 VAR00013 VAR00014 VAR00015 VAR00016 VAR00017 VAR00018

**Coefficients**

|          | Standardized Coefficients |            | df | F      |            | Sig. |
|----------|---------------------------|------------|----|--------|------------|------|
|          | Beta                      | Std. Error |    | Beta   | Std. Error |      |
| VAR00003 | -.144                     | .103       | 1  | 1.963  | .167       |      |
| VAR00004 | .067                      | .104       | 2  | .418   | .661       |      |
| VAR00005 | -.112                     | .103       | 2  | 1.178  | .316       |      |
| VAR00006 | .282                      | .086       | 2  | 10.658 | .000       |      |
| VAR00007 | -.283                     | .110       | 3  | 6.578  | .001       |      |
| VAR00008 | -.542                     | .088       | 2  | 37.668 | .000       |      |
| VAR00009 | -.240                     | .087       | 2  | 7.529  | .001       |      |
| VAR00010 | .023                      | .089       | 1  | .064   | .801       |      |
| VAR00011 | .068                      | .085       | 3  | .626   | .602       |      |
| VAR00012 | .108                      | .098       | 3  | 1.230  | .308       |      |
| VAR00013 | .116                      | .088       | 1  | 1.720  | .195       |      |
| VAR00014 | -.067                     | .086       | 3  | .616   | .608       |      |
| VAR00015 | -.397                     | .199       | 2  | 3.988  | .024       |      |
| VAR00016 | .795                      | .209       | 1  | 14.476 | .000       |      |
| VAR00017 | .073                      | .096       | 1  | .579   | .450       |      |
| VAR00018 | -.238                     | .127       | 2  | 3.527  | .036       |      |

Dependent Variable: VAR00002

**Correlations and Tolerance**

|          | Correlations |         |       | Importance               |                           | Tolerance  |
|----------|--------------|---------|-------|--------------------------|---------------------------|------------|
|          | Zero-Order   | Partial | Part  | After Transform<br>ation | Before Transform<br>ation | Zero-Order |
| VAR00003 | -.107        | -.189   | -.114 | .024                     | .623                      | .556       |
| VAR00004 | .095         | .088    | .053  | .010                     | .610                      | .685       |
| VAR00005 | -.081        | -.147   | -.088 | .014                     | .616                      | .594       |
| VAR00006 | .206         | .409    | .265  | .089                     | .883                      | .827       |
| VAR00007 | .004         | -.332   | -.208 | -.002                    | .544                      | .547       |
| VAR00008 | -.561        | -.645   | -.499 | .468                     | .846                      | .844       |
| VAR00009 | -.316        | -.353   | -.223 | .117                     | .864                      | .581       |
| VAR00010 | .081         | .035    | .021  | .003                     | .824                      | .679       |
| VAR00011 | .138         | .108    | .064  | .014                     | .904                      | .794       |
| VAR00012 | .065         | .151    | .090  | .011                     | .694                      | .783       |
| VAR00013 | -.061        | .177    | .107  | -.011                    | .845                      | .847       |
| VAR00014 | .015         | -.107   | -.064 | -.002                    | .903                      | .785       |
| VAR00015 | .169         | -.265   | -.162 | -.104                    | .167                      | .243       |
| VAR00016 | .247         | .463    | .309  | .302                     | .151                      | .333       |
| VAR00017 | .291         | .104    | .062  | .033                     | .715                      | .728       |
| VAR00018 | -.088        | -.250   | -.153 | .032                     | .411                      | .375       |

Dependent Variable: VAR00002

\* 2-Stage Least Squares.

TSET NEWVAR=NONE .

2SLS VAR00002 WITH VAR00003 VAR00004 VAR00005 VAR00006 VAR00007 VAR00008  
 VAR00013 VAR00014  
 /INSTRUMENTS VAR00009 VAR00010 VAR00011 VAR00012 VAR00015 VAR00016  
 VAR00017 VAR00018  
 /CONSTANT .

## Two-stage Least Squares Analysis

### Notes

|                                |                                      |   |
|--------------------------------|--------------------------------------|---|
| Output Created                 |                                      | 20-OCT-2010 13:07:08  |
| Comments                       |                                      |   |
| Input                          | Data                                 | C:\Users\TONY ALABI\Desktop<br>ew spss thesis data.sav  |
|                                | Active Dataset                       | DataSet1  |
|                                | Filter                               | <none>  |
|                                | Weight                               | <none>  |
|                                | Split File                           | <none>  |
|                                | N of Rows in Working<br>Data File    | 88  |
|                                | Date                                 | <none>  |
| Missing<br>Handling            | Value Definition of Missing          | User-defined missing values are treated<br>as missing.  |
|                                | Cases Used                           | Statistics are based on all cases with valid<br>data for all variables across all equations.  |
| Syntax                         |                                      | 2SLS VAR00002 WITH VAR00003<br>VAR00004 VAR00005 VAR00006<br>VAR00007 VAR00008<br>VAR00013 VAR00014<br>/INSTRUMENTS VAR00009 VAR00010<br>VAR00011 VAR00012 VAR00015<br>VAR00016<br>VAR00017 VAR00018<br>/CONSTANT . |
| Resources                      | Elapsed Time                         |   |
|                                |                                      | 0:00:00.02  |
| Time Series<br>Settings (TSET) | Processor Time                       | 0:00:00.02  |
|                                | Amount of Output                     | PRINT = DEFAULT   |
|                                | Saving New Variables                 | NEWVAR = NONE   |
|                                | Treatment of User-<br>Missing Values | MISSING = EXCLUDE   |
|                                | Equations Include                    | CONSTANT  |

[DataSet1] C:\Users\TONY ALABI\Desktop\new spss thesis data

**Model Description**

|            | Type of Variable |
|------------|------------------|
| Equation 1 | VAR00002         |
|            | VAR00003         |
|            | VAR00004         |
|            | VAR00005         |
|            | VAR00006         |
|            | VAR00007         |
|            | VAR00008         |
|            | VAR00013         |
|            | VAR00014         |
|            | VAR00009         |
|            | VAR00010         |
|            | VAR00011         |
|            | VAR00012         |
|            | VAR00015         |
|            | VAR00016         |
|            | VAR00017         |
|            | VAR00018         |

MOD\_1

**Model Summary**

|            |                            |       |
|------------|----------------------------|-------|
| Equation 1 | Multiple R                 | .239  |
|            | R Square                   | .057  |
|            | Adjusted R Square          | -.042 |
|            | Std. Error of the Estimate | 2.644 |

**ANOVA**

|            |            | Sum of Squares | Df | Mean Square | F    | Sig. |
|------------|------------|----------------|----|-------------|------|------|
| Equation 1 | Regression | 32.172         | 8  | 4.021       | .575 | .795 |
|            | Residual   | 531.408        | 76 | 6.992       |      |      |
|            | Total      | 563.580        | 84 |             |      |      |

**Coefficients**

|            |            | Unstandardized Coefficients |            | Beta   | t          | Sig. |
|------------|------------|-----------------------------|------------|--------|------------|------|
|            |            | B                           | Std. Error | B      | Std. Error | B    |
| Equation 1 | (Constant) | 13.175                      | 30.004     |        | .439       | .662 |
|            | VAR00003   | 1.331                       | 2.628      | 1.023  | .506       | .614 |
|            | VAR00004   | 1.924                       | 5.292      | .692   | .364       | .717 |
|            | VAR00005   | -4.266                      | 16.925     | -2.466 | -.252      | .802 |
|            | VAR00006   | .758                        | 7.938      | .629   | .095       | .924 |
|            | VAR00007   | 1.017                       | 5.571      | .518   | .183       | .856 |
|            | VAR00008   | -1.543                      | 6.079      | -1.071 | -.254      | .800 |
|            | VAR00013   | -.165                       | 7.617      | -.090  | -.022      | .983 |
|            | VAR00014   | -.443                       | 5.399      | -.410  | -.082      | .935 |



## Coefficient Correlations

|            |              |          | VAR00003 | VAR00004 | VAR00005 | VAR00006 | VAR00007 |
|------------|--------------|----------|----------|----------|----------|----------|----------|
| Equation 1 | Correlations | VAR00003 | 1.000    | -.856    | -.872    | .878     | .865     |
|            |              | VAR00004 | -.856    | 1.000    | .837     | -.856    | -.828    |
|            |              | VAR00005 | -.872    | .837     | 1.000    | -.986    | -.982    |
|            |              | VAR00006 | .878     | -.856    | -.986    | 1.000    | .973     |
|            |              | VAR00007 | .865     | -.828    | -.982    | .973     | 1.000    |
|            |              | VAR00008 | .740     | -.804    | -.951    | .947     | .931     |
|            |              | VAR00013 | -.858    | .863     | .958     | -.965    | -.935    |
|            |              | VAR00014 | .772     | -.797    | -.953    | .935     | .915     |

## NPAR TEST

/CHISQUARE=VAR00002

/EXPECTED=EQUAL

/MISSING ANALYSIS.

## NPar Tests

## Notes

|                  |                                |                       |  |
|------------------|--------------------------------|-----------------------|--|
| Output Created   |                                |                       | 20-OCT-2010 13:09:10   |
| Comments         |                                |                       |  |
| Input            | Data                           |                       | C:\Users\TONY ALABI\Desktop<br>ew spss thesis data.sav   |
|                  | Active Dataset                 |                       | DataSet1   |
|                  | Filter                         |                       | <none>   |
|                  | Weight                         |                       | <none>   |
|                  | Split File                     |                       | <none>   |
|                  | N of Rows in Working Data File |                       | 88   |
| Missing Handling | Value                          | Definition of Missing | User-defined missing values are treated as missing.  |
|                  |                                | Cases Used            | Statistics for each test are based on all cases with valid data for the variable(s) used in that test. |
| Syntax           |                                |                       | NPAR TEST<br>/CHISQUARE=VAR00002<br>/EXPECTED=EQUAL<br>/MISSING ANALYSIS.                              |
| Resources        | Elapsed Time                   |                       | 0:00:00.00   |
|                  | Number of Cases Allowed(a)     |                       | 196736   |
|                  | Processor Time                 |                       | 0:00:00.00   |

a Based on availability of workspace memory.

[DataSet1] C:\Users\TONY ALABI\Desktop\new spss thesis data.sav

**Chi-Square Test****Frequencies****VAR00002**

|       | Observed N | Expected N | Residual |
|-------|------------|------------|----------|
| 1.00  | 1          | 17.6       | -16.6    |
| 2.00  | 28         | 17.6       | 10.4     |
| 3.00  | 2          | 17.6       | -15.6    |
| 4.00  | 53         | 17.6       | 35.4     |
| 5.00  | 4          | 17.6       | -13.6    |
| Total | 88         |            |          |

**Test Statistics**

|               | VAR00002 |
|---------------|----------|
| Chi-Square(a) | 117.341  |
| df            | 4        |
| Asymp. Sig.   | .000     |

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 17.6.

>Error # 7001

>There is no license for SPSS for Windows.

>This command not executed.

>Specific symptom number: 18

End of job: 0 command lines 1 errors 0 warnings 6 CPU seconds

>Error # 7001

>There is no license for SPSS for Windows.

>This command not executed.

>Specific symptom number: 18

End of job: 0 command lines 1 errors 0 warnings 3 CPU seconds

# APPENDIX-V

(TESTS ON QUESTIONNAIRE –B)

## NPar Tests

## Notes

|                  |                                |  |
|------------------|--------------------------------|--|
| Output Created   | 21-OCT-2010 03:10:31           |  |
| Comments         |                                |  |
| Input            | Data                           | C:\Users\TONY_ALABI\Desktop\spss Q-B.sav   |
|                  | Active Dataset                 | DataSet3   |
|                  | Filter                         | <none>   |
|                  | Weight                         | <none>   |
|                  | Split File                     | <none>   |
|                  | N of Rows in Working Data File | 20   |
| Missing Handling | Value                          | Definition of Missing  |
|                  |                                | Cases Used   |
|                  |                                | User-defined missing values are treated as missing.  |
|                  |                                | Statistics for each test are based on all cases with valid data for the variable(s) used in that test.   |
| Syntax           |                                | NPAR TEST<br>/CHISQUARE=VAR00015<br>VAR00014 VAR00016 VAR00018<br>VAR00019 VAR00020 VAR00021<br>VAR00022 VAR00023 VAR00024<br>VAR00025 VAR00027<br>/EXPECTED=EQUAL<br>/MISSING ANALYSIS. |
| Resources        | Elapsed Time                   | 0:00:00.00   |
|                  | Number of Cases Allowed(a)     | 52462  |
|                  | Processor Time                 | 0:00:00.00   |

a Based on availability of workspace memory.

[DataSet3] C:\Users\TONY ALABI\Desktop\spss Q-B.sav

## Chi-Square Test Frequencies

**VAR00015 profit motive for esate location**

|                            | Observed N | Expected N | Residual |
|----------------------------|------------|------------|----------|
| 1.00 Yes(10%and below ROI) | 1          | 4.0        | -3.0     |
| 2.00 Yes(11-30%ROI)        | 12         | 4.0        | 8.0      |
| 3.00 Yes(31-50%ROI)        | 4          | 4.0        | .0       |
| 4.00 Yes(51%ROI and above) | 2          | 4.0        | -2.0     |
| 5.00 No                    | 1          | 4.0        | -3.0     |
| Total                      | 20         |            |          |

**VAR00014 access tland for estate**

|  | Observed N | Expected N | Residual |
|--|------------|------------|----------|
| 2.00 subsidized land by governmnet allocation below 50% market value     | 11         | 5.0        | 6.0      |
| 3.00 subsidized land by governmnet allocation but above 50% market value | 1          | 5.0        | -4.0     |
| 4.00 unsubsidized land at market value                                   | 2          | 5.0        | -3.0     |
| 5.00 free land by governmnet allocation                                  | 6          | 5.0        | 1.0      |
| Total  | 20         |            |          |

**VAR00016 depreciation of the Naira/cost of Foreign exchange on estate development**

|          | Observed N | Expected N | Residual |
|----------|------------|------------|----------|
| 1.00 Yes | 14         | 10.0       | 4.0      |
| 2.00 No  | 6          | 10.0       | -4.0     |
| Total    | 20         |            |          |

**VAR00018 importance of profit motives**

|                           | Observed N | Expected N | Residual |
|---------------------------|------------|------------|----------|
| 1.00 not important at all | 2          | 4.0        | -2.0     |
| 2.00 fairly important     | 6          | 4.0        | 2.0      |
| 3.00 neutral              | 1          | 4.0        | -3.0     |
| 4.00 important            | 6          | 4.0        | 2.0      |
| 5.00 very important       | 5          | 4.0        | 1.0      |
| Total                     | 20         |            |          |

**VAR00019 a-developers commitment to estate development-use of registered professionalsalways/payment of full fees**

|          | Observed N | Expected N | Residual |
|----------|------------|------------|----------|
| 1.00 yes | 16         | 10.0       | 6.0      |
| 2.00 no  | 4          | 10.0       | -6.0     |
| Total    | 20         |            |          |

**VAR00020 b-use of certified contracting firms/contract administration process**

|          | Observed N | Expected N | Residual |
|----------|------------|------------|----------|
| 1.00 yes | 16         | 9.5        | 6.5      |
| 2.00 no  | 3          | 9.5        | -6.5     |
| Total    | 19         |            |          |

**VAR00021 c-use of building regulation guidelines to achieve planning design objectives**

|          | Observed N | Expected N | Residual |
|----------|------------|------------|----------|
| 1.00 yes | 18         | 9.5        | 8.5      |
| 2.00 no  | 1          | 9.5        | -8.5     |
| Total    | 19         |            |          |

**VAR00022 strict use of value added technology**

|          | Observed N | Expected N | Residual |
|----------|------------|------------|----------|
| 1.00 yes | 15         | 9.5        | 5.5      |
| 2.00 no  | 4          | 9.5        | -5.5     |
| Total    | 19         |            |          |

**VAR00023 use of research to improve outcome of estate development**

|          | Observed N | Expected N | Residual |
|----------|------------|------------|----------|
| 1.00 yes | 15         | 10.0       | 5.0      |
| 2.00 no  | 5          | 10.0       | -5.0     |
| Total    | 20         |            |          |

**VAR00024 strict use of SON certified building materials**

|          | Observed N | Expected N | Residual |
|----------|------------|------------|----------|
| 1.00 yes | 15         | 9.5        | 5.5      |
| 2.00 no  | 4          | 9.5        | -5.5     |
| Total    | 19         |            |          |

**VAR00025 opinion of construction cost**

|                  | Observed N | Expected N | Residual |
|------------------|------------|------------|----------|
| 2.00 fairly high | 8          | 6.7        | 1.3      |
| 3.00 very high   | 10         | 6.7        | 3.3      |
| 4.00 too high    | 2          | 6.7        | -4.7     |
| Total            | 20         |            |          |

**VAR00027 housing developers criteria for estate development**

|                          | Observed N | Expected N | Residual |
|--------------------------|------------|------------|----------|
| 1.00 not applicable      | 1          | 5.0        | -4.0     |
| 2.00 applicable          | 11         | 5.0        | 6.0      |
| 3.00 strongly applicable | 2          | 5.0        | -3.0     |
| 4.00 neutral             | 6          | 5.0        | 1.0      |
| Total                    | 20         |            |          |

## Test Statistics

|   | VAR00015<br>profit motive for estate location | VAR00014<br>access to land for estate | VAR00016<br>depreciation of the Naira/cost of Foreign exchange on estate development | VAR00018<br>importance of profit motives | VAR00019<br>a-developers commitment to estate development -use of registered professional salwys/payment of full fees | VAR00020<br>b-use of certified contracting firms/contract administration processes | VAR00021<br>c-use of building regulation guidelines to achieve planning design objectives | VAR00022<br>strict use of value added technology | VAR00023<br>use of research to improve outcome of estate development | VAR00024<br>strict use of SON certified building materials | VAR00025<br>opinion of construction cost | VAR00027<br>housing developers criteria for estate development |
|---|---|---------------------------------------|--|--|---|--|---|--|--|--|--|--|
| Chi-Square (a,b,c,d,e)<br>Df<br>Asymp. Sig. | 21.500<br>4<br>.000                           | 12.400<br>3<br>.006                   | 3.200<br>1<br>.074   | 5.500<br>4<br>.240                       | 7.200<br>1<br>.007  | 8.895<br>1<br>.003   | 15.211<br>1<br>.000   | 6.368<br>1<br>.012                               | 5.000<br>1<br>.025   | 6.368<br>1<br>.012   | 5.200<br>2<br>.074                       | 12.400<br>3<br>.006  |

- a 5 cells (100.0%) have expected frequencies less than 5. The minimum expected cell frequency is 4.0.  
b 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 5.0.  
c 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 10.0.  
d 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 9.5.  
e 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 6.7.

GET

```
FILE='C:\Users\TONY ALABI\Desktop\new spss thesis data.sav'.
DATASET NAME DataSet4 WINDOW=FRONT.
*Define Variable Properties.
*VAR00002.
FORMATS VAR00002 (F8.2).
VALUE LABELS VAR00002 .
EXECUTE.
```

# APPENDIX-VI

(TESTS ON QUESTIONNAIRE-C)



## Validate Data

### Notes

|                |                                |  |
|----------------|--------------------------------|--|
| Output Created |                                | 21-OCT-2010 03:52:12   |
| Comments       |                                |  |
| Input          | Data                           | C:\Users\TONY ALABI\Desktop\spss Q-C.sav   |
|                | Active Dataset                 | DataSet0   |
|                | Filter                         | <none>   |
|                | Weight                         | <none>   |
|                | Split File                     | <none>   |
|                | N of Rows in Working Data File | 24   |
| Syntax         |                                | VALIDATEDATA<br>VARIABLES=VAR00002 VAR00003<br>VAR00004 VAR00005 VAR00006<br>VAR00007 VAR00008<br>VAR00009 VAR00010 VAR00011<br>VAR00012 VAR00013 VAR00014<br>VAR00015 VAR00016<br>VAR00017 VAR00018 VAR00019<br>VAR00020 VAR00021 VAR00022<br>VAR00023 VAR00024<br>VAR00025 VAR00026 VAR00027<br>VAR00028 VAR00029 VAR00030<br>VAR00031 VAR00032<br>VAR00033 VAR00034 VAR00035<br>VAR00036 VAR00037 VAR00038<br>VAR00039 VAR00040<br>VAR00041 VAR00042 VAR00043<br>VAR00044 VAR00045 VAR00046<br>VAR00047 VAR00048<br>VAR00049 VAR00050 VAR00051<br>VAR00052<br>/VARCHECKS STATUS=ON<br>PCTMISSING=70 PCTEQUAL=95<br>PCTUNEQUAL=90 CV=0.001<br>STDDEV=0<br>/CASECHECKS<br>REPORTEEMPTY=YES<br>SCOPE=ALLVARS<br>/CASEREPORT DISPLAY=YES<br>MINVIOLATIONS=1<br>CASELIMIT=FIRSTN(100). |
| Resources      | Elapsed Time                   | 0:00:00.06   |
|                | Processor Time                 | 0:00:00.06   |

[DataSet0] C:\Users\TONY ALABI\Desktop\spss Q-C.sav

## Frequencies

### Notes

|                  |                                |   |
|------------------|--------------------------------|---|
| Output Created   |                                | 21-OCT-2010 03:52:49                                |
| Comments         |                                |   |
| Input            | Active Dataset                 | DataSet0  |
|                  | Filter                         | <none>  |
|                  | Weight                         | <none>  |
|                  | Split File                     | <none>  |
|                  | N of Rows in Working Data File | 24  |
| Missing Handling | Value Definition of Missing    | User-defined missing values are treated as missing. |
|                  | Cases Used                     | Statistics are based on all cases with valid data.  |
| Syntax           |                                | FREQUENCIES VARIABLES = PrimaryLast .               |
| Resources        | Elapsed Time                   | 0:00:00.00  |
|                  | Processor Time                 | 0:00:00.00  |

[DataSet0] C:\Users\TONY ALABI\Desktop\spss Q-C.sav

### Statistics

PrimaryLast Indicator of each last matching case as Primary

|   |         |    |
|---|---------|----|
| N | Valid   | 24 |
|   | Missing | 0  |

### PrimaryLast Indicator of each last matching case as Primary

|                      | Frequency | Percent | Valid Percent | Cumulative Percent |
|----------------------|-----------|---------|---------------|--------------------|
| Valid 1 Primary Case | 24        | 100.0   | 100.0         | 100.0              |

EXECUTE.

NPAR TEST

/CHISQUARE=VAR00021 VAR00022 VAR00023 VAR00024 VAR00025 VAR00026 VAR00027  
 /EXPECTED=EQUAL  
 /MISSING ANALYSIS.

## NPar Tests

### Notes

|                  |  |   |
|------------------|--|---|
| Output Created   |  | 21-OCT-2010 03:54:19  |
| Comments         |  |   |
| Input            | Active Dataset                               | DataSet0  |
|                  | Filter                                       | <none>  |
|                  | Weight                                       | <none>  |
|                  | Split File                                   | <none>  |
|                  | N of Rows in Working Data File               | 24  |
| Missing Handling | Value Definition of Missing                  | User-defined missing values are treated as missing.   |
|                  | Cases Used                                   | Statistics for each test are based on all cases with valid data for the variable(s) used in that test.                                |
| Syntax           |  | NPAR TEST<br>/CHISQUARE=VAR00021<br>VAR00022 VAR00023 VAR00024<br>VAR00025 VAR00026 VAR00027<br>/EXPECTED=EQUAL<br>/MISSING ANALYSIS. |
| Resources        | Elapsed Time                                 | 0:00:00.00  |
|                  | Number of Cases Allowed(a)<br>Processor Time | 78694<br>0:00:00.00   |

a Based on availability of workspace memory.

[DataSet0] C:\Users\TONY ALABI\Desktop\spss Q-C.sav

## Chi-Square Test

### Frequencies

**VAR00021 a-impotation of layout and design typologies on AHD-synchretic designs(tripartite histroy)**

|                       | Observed N | Expected N | Residual |
|-----------------------|------------|------------|----------|
| 1.00 not at all       | 2          | 4.8        | -2.8     |
| 2.00 fairly important | 12         | 4.8        | 7.2      |
| 3.00 neutral          | 4          | 4.8        | -.8      |
| 4.00 important        | 4          | 4.8        | -.8      |
| 5.00 very important   | 2          | 4.8        | -2.8     |
| Total                 | 24         |            |          |

**VAR00022 b-cultural responses**

|                       | Observed N | Expected N | Residual |
|-----------------------|------------|------------|----------|
| 2.00 fairly important | 6          | 6.0        | .0       |
| 3.00 neutral          | 1          | 6.0        | -5.0     |
| 4.00 important        | 13         | 6.0        | 7.0      |
| 5.00 very important   | 4          | 6.0        | -2.0     |
| Total                 | 24         |            |          |

**VAR00023 c-climatic conditions**

|                       | Observed N | Expected N | Residual |
|-----------------------|------------|------------|----------|
| 1.00 not at all       | 2          | 4.8        | -2.8     |
| 2.00 fairly important | 6          | 4.8        | 1.2      |
| 3.00 neutral          | 2          | 4.8        | -2.8     |
| 4.00 important        | 10         | 4.8        | 5.2      |
| 5.00 very important   | 4          | 4.8        | -.8      |
| Total                 | 24         |            |          |

**VAR00024 d-building materials**

|                       | Observed N | Expected N | Residual |
|-----------------------|------------|------------|----------|
| 2.00 fairly important | 7          | 6.0        | 1.0      |
| 3.00 neutral          | 2          | 6.0        | -4.0     |
| 4.00 important        | 11         | 6.0        | 5.0      |
| 5.00 very important   | 4          | 6.0        | -2.0     |
| Total                 | 24         |            |          |

**VAR00025 e-technology/capacity building**

|                       | Observed N | Expected N | Residual |
|-----------------------|------------|------------|----------|
| 1.00 not at all       | 2          | 4.8        | -2.8     |
| 2.00 fairly important | 16         | 4.8        | 11.2     |
| 3.00 neutral          | 1          | 4.8        | -3.8     |
| 4.00 important        | 3          | 4.8        | -1.8     |
| 5.00 very important   | 2          | 4.8        | -2.8     |
| Total                 | 24         |            |          |

**VAR00026 f-building activity**

|                       | Observed N | Expected N | Residual |
|-----------------------|------------|------------|----------|
| 1.00 not at all       | 1          | 4.8        | -3.8     |
| 2.00 fairly important | 4          | 4.8        | -.8      |
| 3.00 neutral          | 1          | 4.8        | -3.8     |
| 4.00 important        | 16         | 4.8        | 11.2     |
| 5.00 very important   | 2          | 4.8        | -2.8     |
| Total                 | 24         |            |          |

**VAR00027 g-regulation and standards**

|                       | Observed N | Expected N | Residual |
|-----------------------|------------|------------|----------|
| 1.00 not at all       | 7          | 4.8        | 2.2      |
| 2.00 fairly important | 10         | 4.8        | 5.2      |
| 3.00 neutral          | 1          | 4.8        | -3.8     |
| 4.00 important        | 3          | 4.8        | -1.8     |
| 5.00 very important   | 3          | 4.8        | -1.8     |
| Total                 | 24         |            |          |

**Test Statistics**

|                       | VAR00021 a-<br>impotation of<br>layout and<br>design<br>typologies on<br>AHD-synchretic<br>designs(tripartit<br>e histroy) | VAR00022 b-cultural<br>responses | VAR00023 c-<br>climatic<br>conditions | VAR00024 d-building<br>materials | VAR00025 e-<br>technology/<br>capacity<br>building | VAR00026 f-<br>building<br>activity | VAR00027<br>regulation<br>standards |
|-----------------------|--|----------------------------------|---------------------------------------|----------------------------------|--|-------------------------------------|-------------------------------------|
| Chi-Square(a,b)<br>df | 14.333<br>4  | 13.000<br>3                      | 9.333<br>4                            | 7.667<br>3                       | 33.083<br>4  | 33.917<br>4                         | 11.000<br>4                         |
| Asymp. Sig.           | .006   | .005                             | .053                                  | .053                             | .000   | .000                                | .027                                |

a 5 cells (100.0%) have expected frequencies less than 5. The minimum expected cell frequency is 4.8.

b 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 6.0.